

Innovation in the Management of Upstream State Oil Contracts in the Republic of Congo: From Transaction to Cooperation for Economic Development

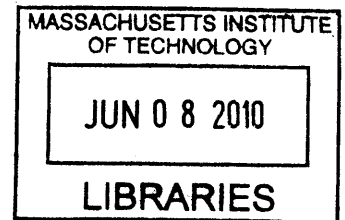
By

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ARCHIVES

SUBMITTED TO THE MIT SLOAN SCHOOL OF MANAGEMENT IN PARTIAL FULFILLMENT
OF THE REQUIREMENT FOR THE DEGREE OF
MASTER OF BUSINESS ADMINISTRATION
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ABSTRACT

This thesis examines the often competitive interests involved in oil contracts and the ensuing strategic dilemmas faced by both the Republic of Congo and international oil companies that operate in that country. Throughout this thesis, we use the Issues-Frameworks-Actions approach to identify, analyze and propose solutions to key problems facing Congo and IOCs.

The paper first analyses the historical, legal and institutional background of oil contracting in the Republic of Congo. The production sharing contract (PSC) is the prevailing contractual framework for oil business between the Congolese government and international oil companies (IOCs). The national oil company, SNPC, has received a mandate from the government to act in its name vis-à-vis IOCs.

In a second step, the paper develops new analytical frameworks and discusses the strategic challenges posed by the current PSCs to both Congo and IOCs. Multiple levels of information and skills asymmetries challenge Congo's ability to effectively negotiate and implement oil contracts. On the other hand, transforming IOCs into active corporate citizens of Congo would guarantee them contract stability and business sustainability.

Finally, against the background of identified problems, the paper makes recommendations as to how Congo and IOCs could address those problems and build lasting partnership. In light of the growing international competition for the African oil and the huge development needs for oil-producing countries like Congo, the paper argues that in the best interest of both the IOCs and the host country, oil contracts should evolve from simple transactions to long term cooperation tools that address each side's expectations and needs. The thesis indeed supports the idea of shifting the contract focus from the traditional oil profit split and government take to broader value creation in the host country.

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I also benefited from the precious feedback and insights of Professors Louis Wells (Harvard Business School), Peter Rosenblum (Columbia University School of Law), Virginia Greiman (Boston University Law School), and would like to express my gratitude to them.

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I am also indebted to many Congolese government officials and oil executives from the Ministry of Hydrocarbons, Ministry of Finance and the National Oil Company SNPC, who shared with me their views about oil contracting and management. While I would lack space to name all of them here, I would like to specifically mention Mr. Denis Gokana, CEO of the NOC, Mr. Serge Ndeko, Director of Hydrocarbons, and Mr. Michel Okoko, Executive Director of EITI Congo, for our informal exchanges when I was the IMF Resident Representative in Brazzaville. However, no idea in this thesis necessarily reflects the official line of thinking of the Congolese government, officials or oil executives.

This thesis would have never been possible without the understanding and support of my wife Catherine, my daughter Nubia and my son Menelik. I felt guilty leaving them to attend MIT. I owe them a huge attention debt.

While I benefited from the insights of all the people mentioned above, the views expressed in this thesis are strictly mine and do not commit any of them in any manner.

EXECUTIVE SUMMARY

The current business model for oil contracting and management in Africa is perceived as neither fair to host countries, nor efficient to either countries or international oil companies (IOCs). The idea of fairness is debatable, as the government share of oil, the usual indicator from the authorities' perspective, is often misleading. On the other hand, oil management by African countries can indeed be described as generally ineffective, from contracting to macroeconomic management of oil revenues for social purposes. Moreover, the sustainability of contracts is questionable. In addition, pervasive poverty even in oil-producing countries calls for a new approach to resource management. Further, owing to strategic considerations, changing patterns in world oil supply are lending a greater energy role to Africa, but also are drawing more scrutiny about oil contracting in Africa. Oil thirsty emerging countries are indeed making headway in the continent to guarantee their supply, hence exacerbating the international competition for oil rent capture. China trades infrastructure and easy loans for African oil, thus changing the rules of the oil contracting game. In this context, how can an African country like the Republic of Congo maximize the value deriving from oil? That question is central to this thesis.

Against the backdrop of that general African context, our analysis of Congo's production sharing contracts points to the need for a strategic shift in oil contracting, both by the country and the IOCs, if the issues of fairness, contract efficiency, competitiveness and business sustainability are to be tackled. To address those issues, we propose a new business model for both parties, essentially leading to a shift from oil contract as transaction to oil contract as a long term cooperation tool between the contracting parties. More specifically, we believe that Congo should shift its focus from the fiscal terms of oil contracts (i.e., government take) to gradual local value creation by IOCs (e.g., enhanced cooperation with the national oil company; local capacity building in oil management through training and knowledge transfer; broader cooperation on relevant public policies, including energy policy). As a result, oil contracts would just be one aspect of the broader country/IOCs relations.

Further, oil contracts are not just about oil. They can be considered from different perspectives:

- **The geo-strategic perspective:** Oil contracts raise the issue of national energy security;
- **The ideological perspective:** Oil contracts fuel the debate on national ownership of natural resources;
- **The economic perspective:** Oil contracts deal with the creation and distribution of economic rent;
- **The development perspective:** Oil is often seen as a development tool, not only a tradable commodity;
- **The legal perspective:** The issue here is how to implement and enforce a contract where one party is a sovereign state;
- **The financial and risk sharing perspective:** Oil projects are selected on the basis of Net Present Value (NPV) of future cash flows and return on investment (e.g., Internal Rate of Return); oil contracts maximize joint NPV by allocating risk efficiently among parties;
- **The political perspective:** Oil contracts reflect the balance of bargaining power among the contracting parties;

- **The supply chain perspective:** The oil contracting can be seen as a chain of decisions and management phases;
- **The public policy perspective:** Oil contracts reflect countries' taxation and FDI policies.

Congo's economy is oil-dependent in significant proportions. On average, over the past few years, oil has accounted for 60-70 percent of GDP; 70-80 percent of Government revenues (including grants and investment revenues); and more than 90 percent of exports.

Against that background:

- Oil is a strategic resource for Congo and its management cannot be separated from the overall management of the country's economy; specifically, the management of that exhaustible resource should be closely tied to fiscal management (budgeting) and social programs (poverty reduction);
- In light of the overwhelming role of oil in the Congolese economy, the government needs to put in place adequate institutional, legal, governance and contractual frameworks to effectively manage oil revenue;
- Focusing on the long term, the government needs to build technical, contractual, financial and managerial skills in oil matters, to really own the resource;
- A proper management of oil contracts (design, negotiation, execution, audits) is of paramount importance.

Production Sharing Contracts (PSCs) between international oil companies (IOCs) and developing countries like Congo try to resolve many dilemmas and conflicts of interest. Those tensions can be described as follows:

- National sovereignty claims are often inconsistent with technical and financial dependence of host country on IOCs;
- There might be frictions between sovereign rights and corporate rights;
- International oil companies and host country both cooperate and compete for oil capture;
- Pro-country fiscal regimes may decrease country's attractiveness to international investors;
- How to calibrate country's oil prospects with country's contract expectations;
- How to ensure contract stability while allowing for flexibility in contract implementation;
- How to strike the right balance between the sophistication of contract and the generally limited implementation capacity of host country;
- How to maintain the short term bargaining edge of IOCs, while building long term partnership with host country.

PSCs in the Republic of Congo (Congo) face all of the above dilemmas. More specifically, the analysis of Congo's PSCs points to a few **strategic challenges for the country**:

- **How to ensure legal consistency:** the multiple sources of law pose the consistency challenge and may point to the need of revising, simplifying and harmonizing the petroleum law;
- **How to calibrate oil contract sophistication with oil contract implementation capacity:** the sophistication of the oil cost recovery and profit oil split schemes (complicated sliding scales and oil price adjustment mechanisms) may not be matched with equal local skills in terms of contract execution, monitoring and audit;
- **How to build country credibility by promoting enhanced oil governance:** reports on PSCs' payments such as bonuses are sketchy and incomplete; also, valuation of oil should be based on an anchor independent of parties' will.
- **How to avoid the principal/agent problem and make the NOC accountable to the state:** the role and accountability of the NOC are not clearly stated in PSCs, nor is its stake in project equity; this also raises the question of the transparency and accountability of the NOC to the government, as well as that of the real control the government exerts over the company;
- **More importantly, how to increase the local value created from oil activities:** there is a clear need to enhance local content in Congo's PSCs, and beyond, devise incentives for IOCs to add local value to their operations. At their current level, local content requirements are just symbolic and nominal. More importantly, without proper local skills, PSCs' stipulations about local hiring and procurement will remain only notional.

On the other hand, OICs also face specific challenges:

- **How to adjust to the new rules of the African oil game, with the growing competition from emerging countries:** a new scramble for African energy resources is underway and traditional Western IOCs are now facing direct competition by China, India, Brazil, Russia and even South Africa. This new context may give more bargaining power to African governments;
- **How to respond to China's business model in Africa:** the Chinese business model is to trade oil (from Africa) for money and infrastructure (to Africa). China's approach challenges IOCs to offer Africans more than oil partnership, and to also integrate countries' development needs in their own corporate strategy;
- **How to build new constituencies in a changing African political landscape, thus mitigating long term political risks:** political ties of the ruling elites with the former colonial power have sometimes given the latter's oil companies a competitive edge. Those ties will falter as a new generation of Africans will be gradually taking over. Younger African generations are better educated and more demanding in terms of government efficiency and accountability. More importantly, the often shocking dichotomy between some countries' oil revenues and their scant development achievements is a political and social time bomb. Moreover, in Congo, the perception is that the Government, not the people, is the sole constituency of IOCs, because of the companies' limited dialogue with the citizens. The wider that gap, the harsher the ideological debate about the political and economic role of IOCs in Africa;

- **How to enhance IOCs' image in Africa:** misunderstandings persist about the roles and strategies of IOCs in Congo. Oil business has suffered a reputation for opaqueness. Fantasies and conspiracy theories abound regarding IOCs' supposed tendency to corrupt and meddle in countries' internal affairs, and to avoid national and international oversight;
- **How to be true to stated corporate values:** are corporate social responsibility and corporate citizenship facts or annual report fads? In Congo, local communities and NGOs alleged that IOCs and the government colluded to deliberately underplay the damage caused to the people and the environment by petroleum activity in some southern shore localities. Also, the analysis of Congo's PSCs have shown that the local content provisions were more notional than real;
- **How to ensure oil contract sustainability:** so far, PSCs have dealt with contract sustainability with a legal tool: the stabilization clause, by which the contract fiscal terms and law are frozen over the duration of the project; softer version of stabilization clauses provide for commitment to re-establishing the ex-ante general equilibrium of the contract, should compelling circumstances occur and alter the original contract. However, in practice, stabilization clause does not equate with contract stability;
- **How to deal with the perceived lack of fairness in oil contracts due to skills and resources asymmetries:** in our view, power and skills asymmetries create an unsustainable advantage over host country. In addition, IOCs sometime advance in the shadow of their home state. Some IOCs might be under the misleading impression that skills and power asymmetries give them an upper hand in contract negotiation with less-skilled African countries. The psychological uncertainty and mental insecurity this creates can in turn lead to relationships tainted with suspicion and to permanent questioning of contractual terms.

In that challenging context, this paper is proposing to IOCs operating in Congo and to the country's government to change their respective business models by gradually shifting the focus of oil contract from individual transactions to long term cooperation, from fiscal terms to skills accumulation. On their part, IOCs would abandon their instinctive "Grab and Go" policy and participate more actively in projects and activities conducive to the economic development of the host country. We believe that this is the best way for IOCs to ensure business sustainability in the country.

Summary recommendations for Congo:

- Shift the focus from government take to long term skills development;
- Put oil management in the broader context of country management;
- Tackle the oil accountability challenge with appropriate mechanisms;
- Calibrate contract complexity to country implementation capacity;
- Develop contract negotiation and contract management skills as top priorities;
- Integrate oil and the rest through a 4-dimension integration policy;
- Address the oil sustainability challenge, beyond contract;

- Identify the factors of the country's comparative advantage, to improve bargaining power.

Summary recommendations for IOCs:

- Move away from the Grab & Go business model;
- Promote contract stability by building eight stability components (8Cs): context, confidence, commitment, clarity, capacity, convergence, consistency and comparability;
- Shift contract focus from transaction to long term cooperation with host country;
- Beyond local content stipulated in contracts, focus on broader local value creation;
- Beat the competition by offering to host country more than oil expertise.

The Table below compares and contrasts the existing and a proposed new oil business models in Africa:

		Existing Business Model	Proposed Business Model
GOVERNMENT	Strategic Objective	<ul style="list-style-type: none"> •Maximize Government's Oil Take •Oil as a Commodity 	<ul style="list-style-type: none"> •Resource Management for Economic Development •Oil as a Development Tool
	Underlying Ideology	<ul style="list-style-type: none"> •Resource Nationalism •Conflict of Interest with IOCs •Government Victim of Power Imbalance 	<ul style="list-style-type: none"> •Cooperation with IOCs •Government Victim of Vision, Strategy and Skill Gaps
	Country/IOC Relationships	Transaction	Partnership
	Key Focus of Oil Contracts	Oil Production Sharing	<ul style="list-style-type: none"> •Capacity Building •Local Content •Local Value Creation •Oil Production Sharing
	Priority of Oil Contract Management	Contract Negotiation and Drafting	Contract Execution and Control
	IOC Selection Process	More or less Negotiated Deals	Open Bidding
	Guiding Principles in Oil Contract Negotiation	Fairness	<ul style="list-style-type: none"> •Fairness •Economic and Social Efficiency
IOC	Business Philosophy	<ul style="list-style-type: none"> •Oil only •Limited local value creation •Quick Return on Investment 	<ul style="list-style-type: none"> •Local Value Creation •Corporate citizenship
	Risk Hedging During Operations	Mainly Contractual and Legal: <ul style="list-style-type: none"> •Non-discrimination •Freedom to Transfer Profits and Assets •Minimization of Local Performance Clauses •Stabilization Clause •Conflict Resolution via International Arbitration 	<ul style="list-style-type: none"> •Alignment of IOC / Corporate Citizenship •Local Value Creation and Constituency Building •Corporate Social Responsibility •Long Term Development Partnership with Country
	Key Benefactor of Value Creation	Shareholders	<ul style="list-style-type: none"> •Extended Enterprise/Stakeholders •Host Country
	Currency of Transaction	Oil Money	Oil and Management Skills
	Product Portfolio	Oil Services	Oil Services + Skills and Knowledge Transfer
	Competitive Advantage of IOC	<ul style="list-style-type: none"> •Home/Host Country Relations •Political Connections 	Ability to Solve Country's Public Policy Challenges
	Performance Metrics	<ul style="list-style-type: none"> •Project-centric •Project Finance (R Factor, NPV, ROR/IRR...) 	<ul style="list-style-type: none"> •Project + Country Focus •Project Finance •Social Metrics (Training, Local Employment, Scholarships, Infrastructure, Schools, Hospitals...)
Required Capabilities	Technicalities of Oil Exploration, Development, Production and Marketing	<ul style="list-style-type: none"> •Help build Integrated National Oil Industries •Comprehensive solutions to country's energy problems 	

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INTRODUCTION: WHY A THESIS ON OIL CONTRACTS IN CONGO?

I was recently the Resident Representative of the International Monetary Fund (IMF) in the Republic of Congo (Congo), the fifth largest oil-producer in sub-Saharan Africa. In that capacity, I was closely involved in the management of the country's oil resources. The IMF program of economic reform with Congo was indeed essentially centered on building the proper institutional setting of oil management, on fiscal management of oil resources and on the governance mechanisms to make sure that oil money was transparently accounted for, fully and regularly transferred to the public treasury and effectively spent on poverty-reducing outlays.

But I wanted to understand the upstream side of oil management, namely oil contracting: how were the contracts designed, negotiated, implemented, monitored and audited? Moreover, Congo authorities often accused the IMF of putting the good governance onus on the sole country, while letting international oil companies operate without real accountability. The authorities often seemed unaware of the operations of IOCs and not fully knowledgeable of the intricate terms of oil contract. As a result, demand for both government and IOCs accountability is mounting, particularly when oil coexists with pervasive poverty and striking inequality. Oil contracts are therefore drawing more scrutiny.

Moreover, international competition for African oil has been growing in recent years and the Chinese business model consisting in trading Africa's oil for infrastructure is challenging the existing contract models. As Africans often complained about the terms of existing oil contracts perceived as unfair to host countries, I wanted to analyze those contracts and see whether their flaws were in the design, negotiation, execution or control, whether the issues was fairness in contracting or inefficiency in executing contract. A thesis seemed to be the best venue for such an endeavor.

Against the above background, this thesis is about how to innovate in the management of upstream state oil contracts in Congo. The proposed path is a paradigm shift for both Congo and the international oil companies (IOCs), namely, a new business model based on broad cooperation between the country and IOCs, rather than on oil contracts and transactions only. On the one hand Congo has huge development needs and on the other, IOCs, owing to their capabilities, resources and multi-business networks, can offer more than oil split and tax payment.

To address those innovation challenges and the underlying issues, this paper will proceed in four steps:

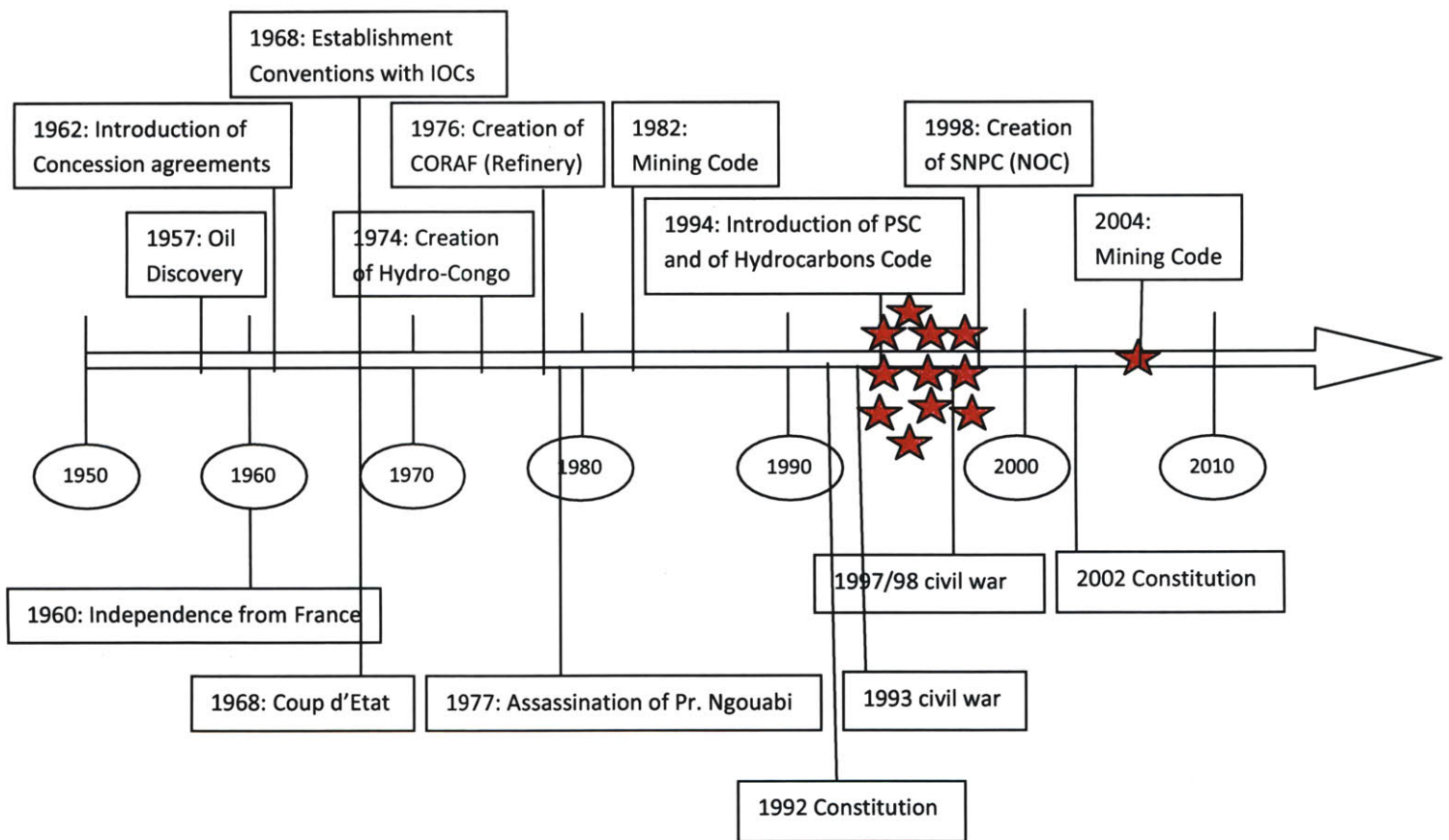
- i. First, it will describe the institutional and legal environment of oil contracting in Congo;
- ii. Secondly, the paper will analyze the existing oil contracts in Congo; those contracts are in the form of production sharing contracts (PSCs);

- iii. Subsequently, the paper will identify the specific issues Congo PSCs raise, the challenges the country faces in trying to resolve them and it will accordingly make recommendations;
- iv. Lastly, this paper will identify the strategic challenges facing IOCs and offer some proposals as to how to tackle them.

CHAPTER I: OIL CONTRACTS IN THE REPUBLIC OF CONGO: THE LEGAL AND INSTITUTIONAL FRAMEWORK

I-1 A brief history of oil in Congo and its role in the country's economy

Republic of Congo: Oil and political timelines



PSC: 1994 to 1997: Conversion of Concessions into PSC or new PSC; 2004: Brand new PSC

The first oil discoveries in Congo date back to 1957 when the country was under the French colonial rule. From 1962, in the aftermath of independence from France, to 1994, concession agreements were the legal vehicle for oil contracting in Congo. Until 2002, the country has experienced social and political turmoil, including coups, political assassinations and civil wars.

In spite of that troubled political background, oil exploration and production thrived, mainly offshore (around the coastal city of Pointe-Noire). Key milestones in the institutional developments of the oil sector include:

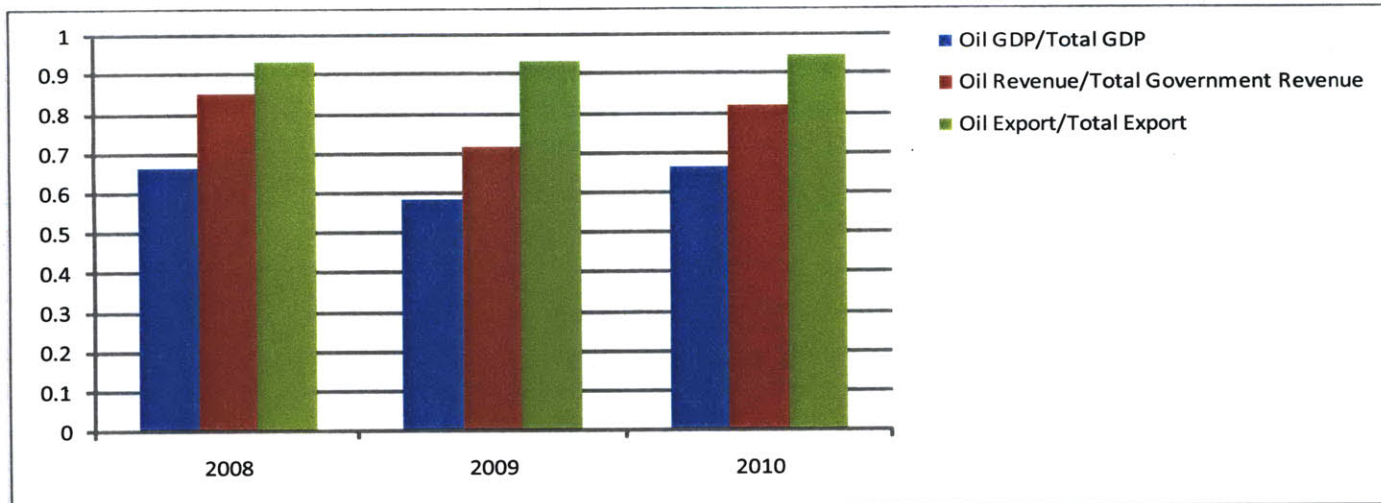
- The initial legal framework was the **concession agreement** introduced in 1962. Under such an agreement, the IOCs alone finance all the needed investments, take all the risks and own the oil in case of conclusive discovery. They then pay taxes and royalties to the government during the 10-30 year term of the concession. From that standpoint, the concession looks like a rental of government's property;
- In the early days of oil exploration and production: the 1968 **Establishments Convention (later amended)** with leading IOCs (Elf, Agip, Conoco, BP, Chevron, Amoco, and Arco). Those conventions define the framework of contractual, legal and financial relationships of IOCs with the Congolese state;
- Creation in 1974 of the Hydro-Congo, a preliminary version of a national oil company, followed by the establishment in 1976 of a national refinery, CORAF;
- Drafting of a **Mining Code in 1982**. The Code distinguishes three types of hydrocarbons permits: prospection, research and exploitation. A new Code would be introduced later in 2004;
- Introduction of **Production Sharing Contracts (PSC)** and of a **Hydrocarbons Code** in 1994. Most of the existing concession agreements have been converted into PSCs. The PSC is henceforth the prevailing contractual vehicle for oil. The Hydrocarbons Code supersedes the Mining Codes with regard to oil and gas matters. While the IOCs research and develop oil at their own risks as in a concession agreement, in a PSC, the host state owns the produced oil and remunerates IOCs in kind (oil), after allowing them to recoup their investment and expenses (cost oil);
- Transformation in 1998 of Hydro-Congo into a **full-fledged national oil company (NOC)**, *Société Nationale des Petroles du Congo (SNPC)*. SNPC has received mandate from the state to negotiate with foreign IOCs. SNPC also markets the government's share of profit oil (oil after reimbursement of foreign investors' costs). The NOC contemplates developing skills both in upstream (production) and downstream (distribution) oil, over the long run.

The above chart "**Republic of Congo: Oil and political timelines**" summarizes the key developments in oil (top part), in parallel with key events in the political arena (bottom part). It is striking to note that:

- Political turmoil impeded progress neither on the institutional development of oil activities which culminated in 1994 with the introduction of PSCs, nor on the oil industrial activity as production rose from almost nil in the 1960s to near 100 million barrels in the late 1990s, making Congo the fifth largest oil producer in Sub-Saharan Africa after Nigeria, Angola, Equatorial Guinea and Gabon;
- The renegotiation of concessions and their transformation into PSCs took place between two civil wars (1993 and 1997), suggesting some correlation between oil rent –seeking and political instability;
- The concession agreements as well as the establishment conventions, signed in the wake of independence, have been deemed too favorable to IOCs, hence the government’s relentless efforts to renegotiate them. Amendments were later added to the establishment conventions whereas the concession agreements were largely phased out and converted into PSCs. The government still has strong feelings about the conventions;
- The establishment of a national oil company (Hydro-Congo and later SNPC) and a national refinery (CORAF), signals the government’s will to develop national oil skills and industry. The early attempts in the mid-1970s (creation of a NOC in 1974 and a national refinery in 1976) were followed by the assassination of President Marien Ngouabi in 1977.

Oil in the economy of the Republic of Congo

With about 1.3 billion barrels of oil reserves, Congo is listed as the fifth largest oil producer in sub-Saharan Africa. The country’s gas remains largely untapped. Roughly, oil accounts for 80 percent in Congo’s economy as described below.



	2008	2009	2010
GDP at current Price (FCFA bn)	4902	4106	5616
Total government revenue (FCFA bn)	2480	1491	2662
Total exports FOB (FCFA bn)	3601	2876	4294
Total oil production (Million of barrrels)	87	102	128
Average world oil price (\$/barrel)	97	61.5	76.5

Source: IMF (adapted)

Congo's economy is oil-dependent in significant proportions. On average, oil accounts for:

- 60-70 percent of GDP;
- 70-80 percent of Government revenues (including grants and investment revenues);
- Above 90 percent of exports.

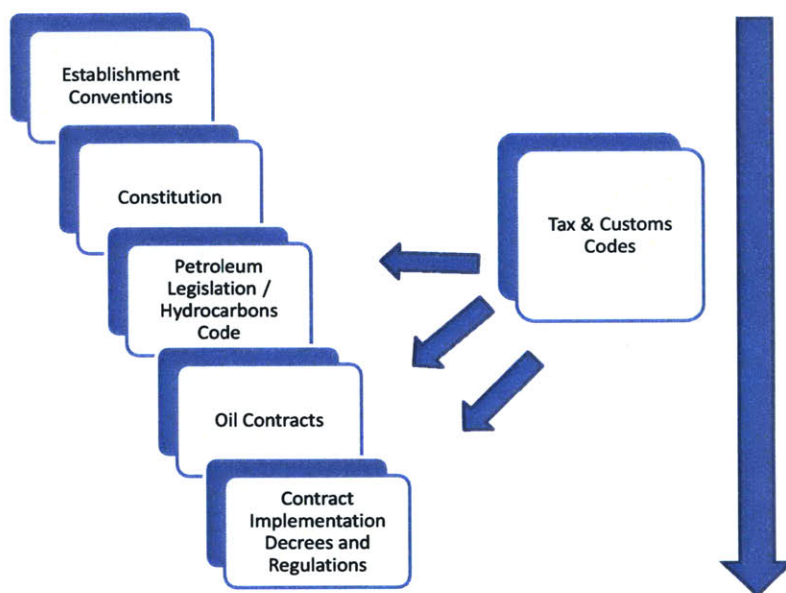
Against that background, the following strategic conclusions can be drawn:

- Oil is a strategic resource for Congo and its management cannot be separated from the overall management of the country's economy; specifically, the management of that exhaustible resource should be closely tied to fiscal management (budgeting) and social programs (poverty reduction);
- In light of the overwhelming role of oil in the Congolese economy, the government needs to put in place adequate institutional, legal, governance and contractual frameworks to manage oil revenue;
- Beyond such frameworks and focusing on the long term, the government needs to build technical, contractual, financial and managerial skills in oil matters, to really own the resource;
- In this context, the proper management of oil contracts (design, negotiation, execution, audits) is of paramount importance.

I-2 The Legal Sources: the Constitution, the Hydrocarbons and Mining Codes, and Other Pertinent Laws and Regulations

The Graph below summarizes the legal sources and their hierarchy for oil contracts in Congo.

Hierarchy of Oil-related Laws and the Challenge of Legal Consistency



The overlapping of legal sources poses the challenge of legal consistency among the various sources. Indeed, while the Constitution reaffirms the national sovereignty of the country over its natural resources, the PSCs, while stating that the prevailing contract law is that of Congo, continue to claim that the produced oil is the joint property of the state and IOCs. Similarly, despite the existence of Tax Code that defines the rate of tax for business income (BIT), many PSCs continue to refer to the Hydrocarbons Code with regard to the BIT.

A summary of key features of the Congo 1994 Hydrocarbons Code

For the purpose of this summary, we use state or government interchangeably.

Legal scope of the Code:

The Code is a law voted by the parliament and promulgated by the President of the Republic.

Rationale: the Code defines the legal and fiscal regimes applicable to hydrocarbons prospection, research, exploitation, storage and transportation, as well the rights and obligations of the operators with regard to due diligence, safety and environment protection.

The Hydrocarbons Code is distinct and separate from the 1982 Mining Code which applies to other minerals. In case of conflict of laws in the hydrocarbons sector, the Hydrocarbons Codes supersedes the Mining Code.

Minerals ownership:

Hydrocarbons in the soil and sub-soil belong to the nation and the state is vested with the powers to manage them.

Hydrocarbons permits and activities:

Holders of Hydrocarbons prospection and development permits are subject to the Congolese law.

Prospection permits (search for early hydrocarbon indices) are granted by ministerial order (*Arrêté*) (Ministry of Hydrocarbons). Such a permit gives non-exclusive prospection rights within a defined area, for a period of one year renewable. Prospection permits are not tradable.

Research permits (confirmation of sustainable and substantive hydrocarbons indices) are granted by a ministerial decree decided upon during the Council of Ministers. Research permits are granted through bidding. Such a permit gives exclusive rights within a defined area, for a period of four years renewable twice by a three year period. Research permits can be traded, subject to prior authorization by the Government.

Development permits (preparation phase, prior to hydrocarbons production and transportation) and exploitation permits (production and transportation of hydrocarbons) are granted by a ministerial decree decided upon during the Council of Ministers to a holder of a conclusive research permit (substantiated proof of hydrocarbons; proven technical feasibility and economic return). Unitization may be necessary in case deposits are common to many research permits. Research permits give exclusive rights within a defined area, for a period of twenty years, adjustable depending on development and production circumstances. Permits can be extended by five years. Actual development work ought to start within twelve months following permit attribution. Research permits are distinct from oil ownership and they can be traded, subject to prior authorization by the Government.

Data ownership:

Hydrocarbons data collected in the context of prospection, research, development and exploitation activities belong to the state and should be shared with the government as they become available.

Local content:

IOCs ought to train nationals in the various hydrocarbons activities described above, to hire nationals in priority, and to buy local goods and services, assuming the local input offers the same skills or qualities. They also ought to supply in priority the domestic hydrocarbons market.

On international oil companies:

Due diligence by IOCs and industry standards: IOCs are expected to use state of art hydrocarbons exploration and production technologies to maximize filed output and return, while observing industry standards with regard to safety, health and environment protection. Gas flaring is subject to government's authorization. IOCs are required to regularly report their activities, results and work programs to the government.

Technical capabilities and financial resources of candidate IOCs should be proportionate to the targeted hydrocarbons activities.

IOCs granted permits should establish for their operations local subsidiaries subject to Congolese law.

Production sharing contracts:

The production sharing contract (PSC) is the contractual framework under which retained IOCs should operate. PSCs should be approved by law. However, other contractual forms might be considered.

Recoverable oil costs are capped at 50 percent of production. However, special operational circumstances (large size of costs, onerous technology or exceptional geological challenges) may lead to lift the threshold to 70 percent.

Profit oil is defined as production minus cost oil and royalty. PSCs define the modalities of profit oil split the government and IOCs.

IOC's equity in oil is not tradable without the prior consent of the government.

IOCs can freely transfer their revenues out of the country.

Tax and custom regimes of hydrocarbons activity:

IOCs pay **bonus** to the state, once they are granted research permit and exploitation permit. Bonus payments are not cost recoverable and are not cost deductible for income tax purposes.

Business income tax rate is 35 percent and tax is payable for a period of five years maximum. The tax rate may be increased after five years, subject to government/IOCs negotiations.

Ring fencing: each permit ought to have separate accounts and consolidation of profits and losses. However, special operational circumstances (large size of costs, onerous technology or exceptional geological challenges) may lead the parliament to authorize consolidation.

Explorations costs are depreciated at the rate of 100 percent. All other depreciable costs are depreciated by 20 percent over a period of five years beginning with sellable production.

Interests on debt and other financial costs are cost recoverable (from cost-oil) and cost deductible (from income), up to the limit of 50 percent of the cost of the underlying investments.

Royalty rate for liquid hydrocarbons is set at 15 percent of production.

The state can carry out or commission tax audits on IOCs, specifically with regard to cost oil, profit oil, royalty and income tax computation.

Breach of law, penalties and sanctions:

The government can withdraw hydrocarbons permits from IOCs for the following reasons: non-observance of work program; inability to pay royalty; title or equity transaction without prior government's consent; non-respect of health, security and environment standards; low output as compared to field potential.

Non-compliant IOCs should pay penalties (and may face imprisonment) in the following cases: non implementation of work program; false and misleading information prior to permit granting and on ongoing operations; false or incomplete information on hydrocarbons findings; limitation of site access to government representatives.

Contracts prior to this Code:

They remain enforceable and unaffected by the present Code.

I-3 The Model Framework for Petroleum Contracting: The PSC

Source of contractual law:

The plurality of legal sources governing the petroleum activities is a bit confusing. Sources include:

The 1968 Establishment Conventions: They constitute the framework for legal, contractual, fiscal and financial relationship between Congo and IOCs. They are defined as supranational laws.

The country's Constitution: In its preamble, the 2002 Constitution states the national sovereignty over natural resources as a key prerequisite for development. Article 38 defines as crime any agreement or attempt thereof that deprives the country of due remuneration of its natural resources. Article 39 defines such attempts or facts as acts of treason.

The Hydrocarbons Code: Discussed in more detail in the next pages

The PSCs: Discussed in more details in the next pages. Accompanying laws and administrative orders pertain to the vote and implementation of PSCs.

The Tax and Customs Codes: They deal mainly with special tax and customs arrangements such as exemptions.

Key items in Congo's Model Production Sharing Contracts

We use state or government interchangeably.

Congo's full Model PSC encompasses 27 Articles, plus an accounting annex ("Accounting Procedures") of another 34 Articles, plus an annex on customs regime applicable to imports and exports carried out by IOCs and their sub-contractors. For the sake of concision and focus, those documents are summarized in 10 key themes as follows:

1. **Definitions of key contractual terms:** key terms such as calendar year, oil barrel, oil production, cost oil, cost stop, research/development/exploitation/abandonment costs.
2. **Legal nature of the contract, the parties involved and the contract scope:** the contract pertains to oil production and sharing between the state and IOCs, within a specified permit zone; authoritative legal bases include the PSC itself, the Hydrocarbons Code, bilateral investment treaties, special agreements between Congo and an IOC; officially, the two parties involved are the Congolese government represented by the Minister of Hydrocarbons (assisted by the CEO of the national oil company) and a consortium of IOCs (*Contractor*) represented by an *Operator*.
3. **IOCs general obligation vis-à-vis Congo:** due diligence, adequate capabilities and resources, observance of oil industry standards and best practices, data sharing/disclosure/reporting obligations.

4. **Organization and administration of oil operations:** the related clauses deal with the joint management committee (government representative and IOCS), the work program and the related budgets, IOCs disclosure requirements and monitoring mechanisms for the government.
5. **Oil accounting, valuation, taxation and government/IOCs profit oil split:** listing and description of recoverable oil costs, capping of recoverable oil costs; sliding scale mechanisms of cost recovery; government/IOCs shares of profit oil and related sliding scales; reference price for oil valuation; royalty rate; bonus payments; special oil tax (PID, or *Provision pour Investissements Diversifiés*); business income tax applicable to IOCs operating income; customs exemption on imports and exports of items related to oil operations; the annex on Accounting Procedures provides details on cost computation and cost recovery, assets, inventories, oil lifting, depreciation and amortization modes, taxation and audits.
6. **Local content:** training of nationals, local employment, local procurement by IOCs.
7. **Oil and assets ownership:** produced oil at wellhead belongs to both the state and participating IOCs; tangible and intangible production assets are to be transferred to the government at the expiration of the PSC.
8. **Disclosure by IOCs and confidentiality clauses:** types and frequency of reports to be produced by IOCs to inform the government; sharing of geological data with the government; as a general rule, contract terms are not accessible by third parties, except in a few cases. However, the International Monetary Fund demanded that the government post oil contracts on the Internet, for transparency purposes.
9. **Applicable law, Force Majeure and dispute resolution:** Congo law is the law of the contract; Force majeure clause lists exceptional, unpredictable and uncontrollable circumstances under which the contract is suspended without prejudice to the parties; international arbitration under ICSID auspices is the preferred mode of dispute settlement.
10. **Contract effect, flexibility, stabilization clause, freedom of transfer and termination:** the PSC comes into effect after a vote by the parliament and the promulgation of the law; amendments to the contract are possible, to restore the general economic balance if the latter is affected by circumstances; the government commits not to change the oil tax regime during the contract life; Congo grant to IOCs freedom of revenue and currency transfers; the PSC expires at the end of the exploitation permit's term, or as a sanction for performance failure by IOCs, or as voluntary decision by IOCs (after consultation with the government).

I-4 The Relations between the State and the National Oil Companies and the governance of the NOC

The national oil company, SNPC, was established in 1998, by a national law (*Loi No. 1, 23 avril 1998*) to replace Hydro-Congo, the former state oil company. SNPC is wholly owned by the Congolese state. Key missions of the company include:

- To represent the state in negotiations with foreign oil companies and business partnerships with them;
- To undertake and participate in the name of the state, in industrial, commercial and technical oil operations;

- To undertake, in the name of the state, in oil & gas investment, management and audits;
- To market the government's share of oil;
- To hold and manage government stakes in oil projects;
- To advise the government on oil policies;
- To promote national skills in oil activities.

The NOC's resources derive from commissions paid by the state (1.6 percent for oil marketing), state subsidies, loan proceeds, dividends from equity stakes and revenues from the other company's activities (e.g. real estate). The company is placed under the dual supervision of the Ministry of Hydrocarbons (for oil & gas activities and compliance with broader public policy objectives) and the Ministry of Finance (for financial activities and compliance with government financial management rules). The NOC has a board and a management team. Board members are appointed by presidential decree and include representatives of the Presidency of the Republic (Chairman of the board), Ministry of Hydrocarbons, Ministry of Finance, Ministry of Foreign Affairs, Tax Directorate and of the company itself. The company board examines oil contracts.

The NOC is subject to control by external auditors, and by permanent control by the Ministry of Hydrocarbons and relevant state audit bodies, including the Court of Accounts (supreme state audit institution).

In 1999, the government transferred to SNPC the entirety of its stake (100 percent) in the national oil refinery CORAF.

State/NOC relations have been later formalized in a Convention. The Convention reiterates the mandate given by the state to SNPC on oil matters, but specifies that the ability to grant oil permits and to collect oil taxes remains the sole prerogative of the government. The Convention specifies the modalities of state oil assets management and state oil marketing by SNPC. SNPC is obligated to transfer to the public treasury the proceeds of oil government oil sales within 8 operating days. The NOC is obligated to provide to the state details of oil commercialization, including quantities, shipment dates and price. The Convention mentions the possibility for the state to commission an auditor to verify SNPC's oil marketing practices.

I-5 The Relations between the National Oil Company and Foreign Oil Companies

The Association Contract (AC) is the official legal framework that governs the relationships between the NOC and IOCs. The AC has two important appendices: the decree granting oil permits to the participating IOCs and the Accounting Agreement that addresses the modalities of oil accounting. Key items of the AC include:

- Details of equity participation in the oil projects, including the NOC's share;

- The designated lead contractor among the IOCs. The lead contractor (*Opérateur*) represents all the participating IOCs in their dealings with the Congolese government and SNPC;
- Details on how petroleum projects will be carried out;
- Obligations of IOCs, including tax obligations and local content in the context of a PSC;
- Modalities of administrative running of the oil consortium;
- Preemptive rights given to affiliated companies with regard to equity transfer, but within the rules specified by the PSC (i.e. prior government's consent).

The AC also restates some of the PSC provisions.

CHAPTER II: ANALYSIS OF CONGO PSCs

II-1 Usual forms and characteristics of oil contracts

From a legal standpoint, three main types of oil contracts exist (various combinations do also exist):

- **The Concession;**
- **The Production Sharing Contract;**
- **The Service Contract.**

In the Table below, we summarize the key characteristics of the different oil regimes, although Congo henceforth operates only under PSCs.

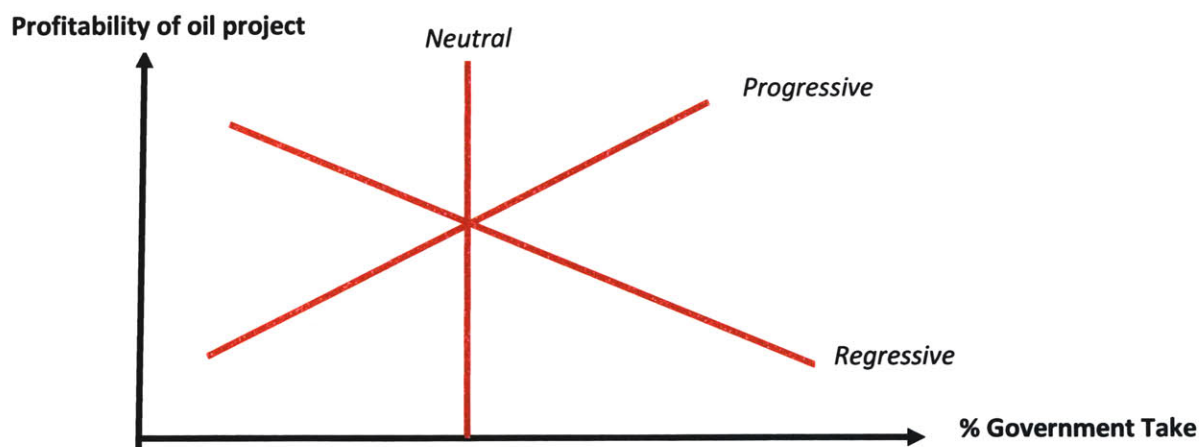
	Supervision of oil operations by the government	Oil Ownership	Key Risk Factors for IOC	Typical Remuneration for IOC	Risk for Government	Remuneration for Government
Concession	Weak; through government broader regulations	IOC	<p>*Geological and Operational risks: Capital investment lost if no oil discovery or discovery but oil not commercially relevant; cost control and oil price uncertainties during project life;</p> <p>*Political risks: host country stability; Government discretionary power; Contract stability;</p>	All oil belongs to IOC	<p>*Political: Sovereignty forgone?</p> <p>*Fiscal: forfeiting oil revenues</p> <p>* Limited influence, control over “spillovers”, development impacts</p>	<p>*Royalties</p> <p>*Taxes</p>
Production	*Through	State	*Geological and	In-kind (oil):	*Agency risks	*Royalties

Sharing Contract	NOC's participation ; *But participation does not necessarily imply supervision in terms of production profile, safety/environment, or local economic impacts. Only implies oversight in terms of cost and share splitting.		Operational risks: Capital investment lost if no oil discovery or discovery but oil not commercially relevant; cost control and oil price uncertainties during project life; *Political risks: host country stability; Government discretionary power; Contract stability;	Cost Recovery + Share of Profit Oil	with IOC (Government as Principal) *Limited influence, control over "spillovers", development impacts *unequal sharing of "cost overruns" to the extent that costs are recovered prior to fiscal take	*Bonuses * Share of Profit Oil *Taxes
Service Contract	Strong in theory through Ministries and NOC	State	Commercial: being paid by government	Cash: Cost recovery + Flat or Variable Fee	Agency risks with IOC (Government as Principal)	All oil belongs to government

In addition to the legal classification, from a government's standpoint, oil contracts can also be economically characterized as regressive, neutral and progressive; here also, these broad characterizations do not preclude the existence of hybrid forms:

- **Regressive contracts:** government take decreases with oil project profitability (e.g. contracts with bonuses and royalties as a fixed percentage, as cost recovery limit increases);
- **Neutral contracts:** government take remains constant whatever the level of oil project profitability (e.g. PSCs with a fixed split rate and full cost recovery);
- **Progressive contracts:** government's take increases with oil project profitability (e.g. PSC with sliding production or profit scales).

As just one way of quickly looking at contracts and in a very rough approximation, we schematize in the Graph below the different economic characterizations of oil fiscal regimes. Indeed, "progressive" does not mean the government is better off nor "regressive" it is worse off.



II-2 Dissecting Congo's PSCs: Salient Features

Congo was under the regime of concession agreements from 1962 to 1994. In 1994, two important developments took place: on the one hand a new Hydrocarbons Code was introduced, thus superseding the Mining Code of 1982 on oil and gas matters; on the other hand, the country adopted the production sharing contract as the unique vehicle for new oil contracts. Between 1994 and 1997, eleven concession agreements were converted into PSCs after difficult and protracted negotiations with IOCs. Chief among the contentious issues was the renegotiation of the 1968 Establishment Conventions that govern the fiscal and financial relations between the country and foreign oil companies.

Four IOCs stand out by their importance in E&P activities in Congo, namely the French Total (after the group acquisition of Elf), the Italian ENI (formerly Agip), the French Zetah Maurel & Prom and the American Chevron. According to the Congolese Hydrocarbons Ministry, the market shares of the various companies were as follows in 2006: 45 percent for Total; 24 percent for ENI; 21 percent for Zetah Maurel & Prom. Chevron and others shared the remaining 10 percent.

Among the many items of Congo PSCs, the following ones are especially important and will be elaborated on accordingly:

- Contract Law
- NOC's Participation in Projects
- Ownership of oil
- Cost Oil Recovery: Limits, Ring-fencing and Carry Forward
- Split of Profit Oil Between Government and IOCs; oil taxation
- Local Content
- Cession of Oil Equity
- Contract Termination
- Uncertainty Management, Force Majeure and Stabilization Clause
- Dispute Resolution

The law of contract:

As discussed earlier, Congo law is the law of the contract.

The participation of the national oil company in projects:

Strangely, Congo's PSCs are often silent on the participation of the NOC in oil projects, a key item in traditional oil contracts. While a Convention exists between the State and the NOC with regard to the latter's mandate (negotiating and representing the state on oil matters; marketing of state oil...), Congo's PSCs barely mention the NOC in explicit terms. For instance, among the twelve PSCs studied, the NOC's participation (equity stake) is mentioned only in one of them. Information on the participations is to be found in the NOC's annual reports, not in the PSCs themselves. The NOC's participation ranges from 15 to 35 percent. Beyond the expected financial return, Congo NOC's participation in projects serves many purposes:

- Project risk-sharing (if oil is found) and signal of government's commitment;
- Country's willingness to learn about oil E & P and to build local capacity;
- Control and monitoring purposes: as the government's agent, the NOC needs to get involved in oil projects to learn firsthand about the IOCs' practices, behavior and compliance with contract terms and country laws.

Ownership of oil:

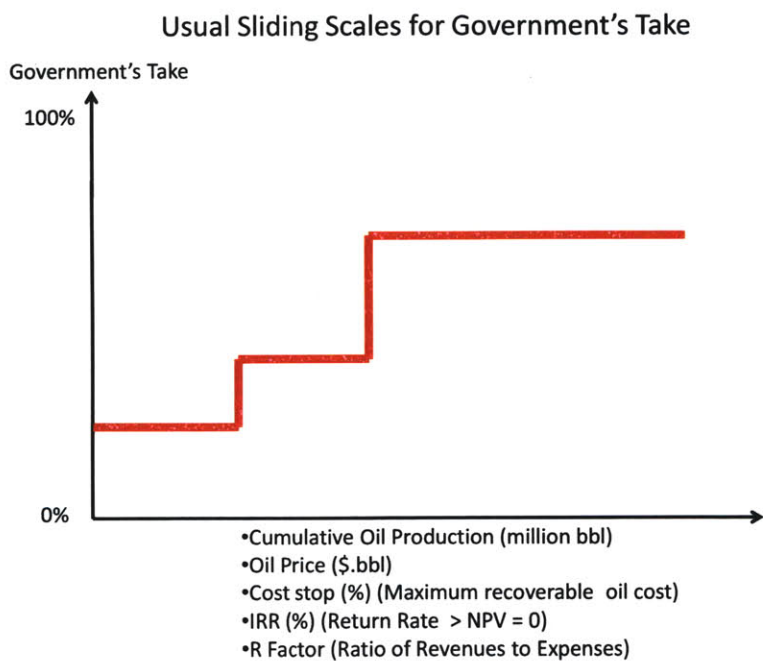
According to Congo's PSCs, oil belongs to both the state and IOCs. This seems to be a breach of the Constitution that solemnly proclaims the exclusive sovereignty of the nation over the natural resources. In the first place, PSCs replaced concession agreements precisely to assert state sole ownership of oil. From that standpoint, Congo PSCs look a bit odd on the issue of ownership.

Cost Oil Recovery: Limits, Ring-fencing and Carry Forward:

Oil costs (eligible operating and investment costs) are recoverable by IOCs. The recovery takes the form of in-kind reimbursement once oil is discovered. The sharing of oil between the government and IOCs takes place only once oil costs have been deducted from production.

As a result, oil costs are not only an accounting issue, but more importantly a strategic one. Indeed, it is vital for the government to exert control (audits) over IOCs declared costs, as they determine what is left to be split among the parties participating in the project. Generally, the amount of oil cost recoverable annually is capped (**Cost stop**), to allow the government to collect some revenue; Congo’s limit runs between 50 and 70 percent. As described in a Table to follow, Congo has in place a combination of the capping with some form of **sliding scales** (sometime confusing) based on either:

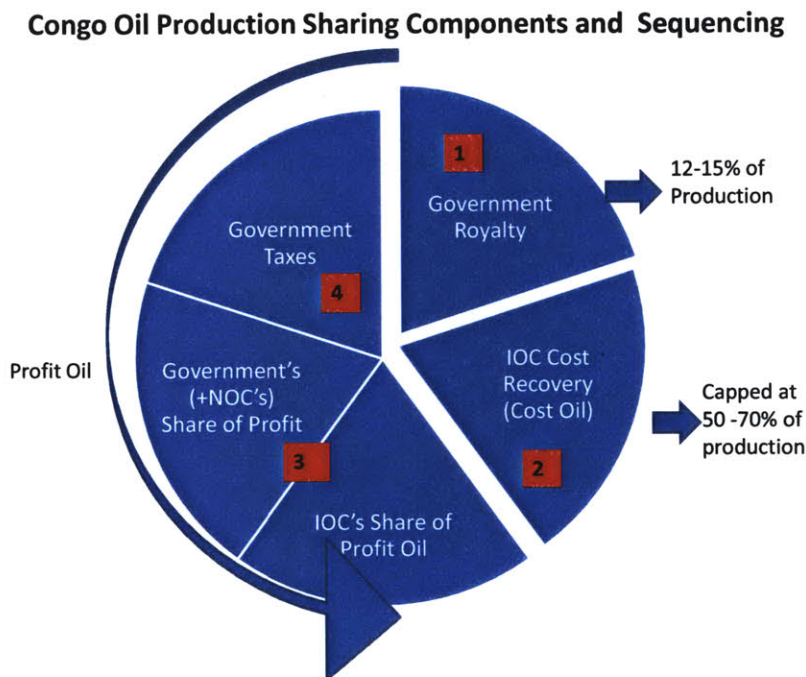
- The price of the barrel of oil;
- The cumulative oil production in millions of barrels;
- The technical difficulties attached to oil extraction (e.g. depth of water in meters);
- Some mechanism for updating thresholds based on US inflation rate.



Ring-fencing refers to the identification of every permit as a unique center of revenue and costs, thus precluding consolidation of permits for accounting purposes. Ring-fencing is the rule in Congo.

Cost carry forward is the rule in Congo: oil costs above the recoverable limit can be carried forward onto the next fiscal years. This introduces flexibility in cost recovery, while allowing the government to cash revenue over the duration of the contract.

Split of Profit Oil between the government and IOCs:

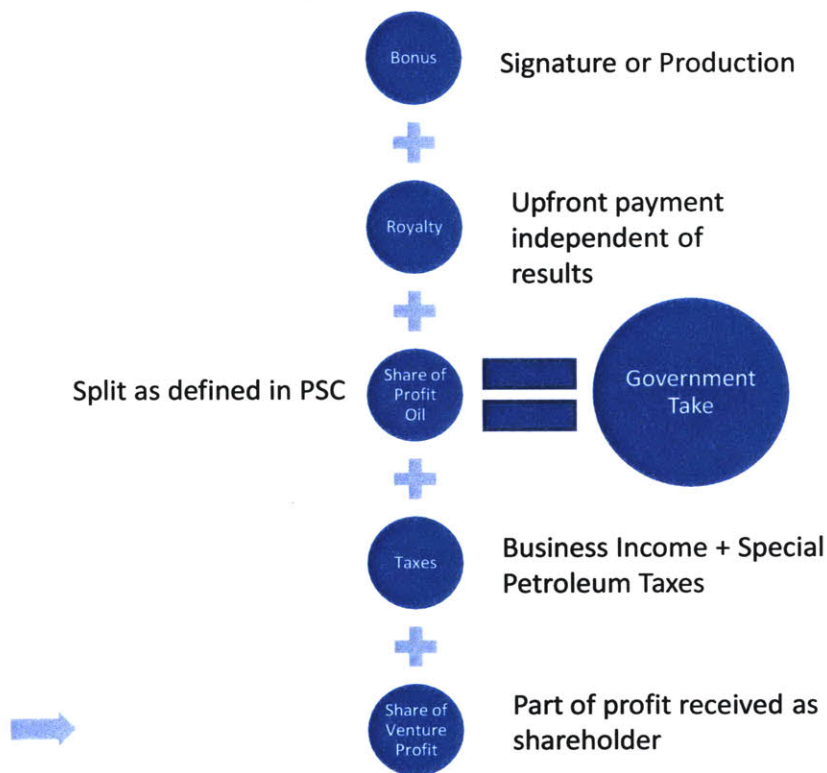


The Graph above describes the typical sequencing in capturing value and how the state/IOCs split is organized, once oil is produced:

- The state is paid a royalty amounting to 12-15% of production;
- Then IOCs recoup their costs (eligible opex and capex), within the limit of 50-70 percent; through the production cycle, costs typically comprise exploration, development, production and abandonment cost;
- The balance (after royalty payment and cost recovery) is split between the state and IOCs according to modalities defined in the PSC. It is worth noting that there are NO split rules and that the modalities of split vary tremendously;
- The government also cashes taxes paid by IOCs on their income.

In the end, the **government's take** of oil can be summarized as follows:

GOVERNMENT'S TAKE



The total Government take includes bonuses, royalty, share of profit oil, taxes and dividends. **Bonuses** are paid at contract signature and/or at some stage of oil production. A signature bonus is totally unrelated to prospects of oil finding and to IOCs future income. In that sense, it is the riskiest investment made by IOCs. As seen with the sequencing of payments to the government, **royalty** payment does not depend on IOCs results either; it however takes place once oil is extracted. In addition to royalty, Congo PSCs the payment of a **special petroleum tax** of 1 percent of production (PID or *Provision pour Investments Diversifiés*), aimed at supporting local economic initiative, including small and medium size enterprises. This tax is also unrelated to IOCs results after production. **Business income taxes** and **dividends** add to the overall government's take.

**A numerical example of
Government/IOC Split**

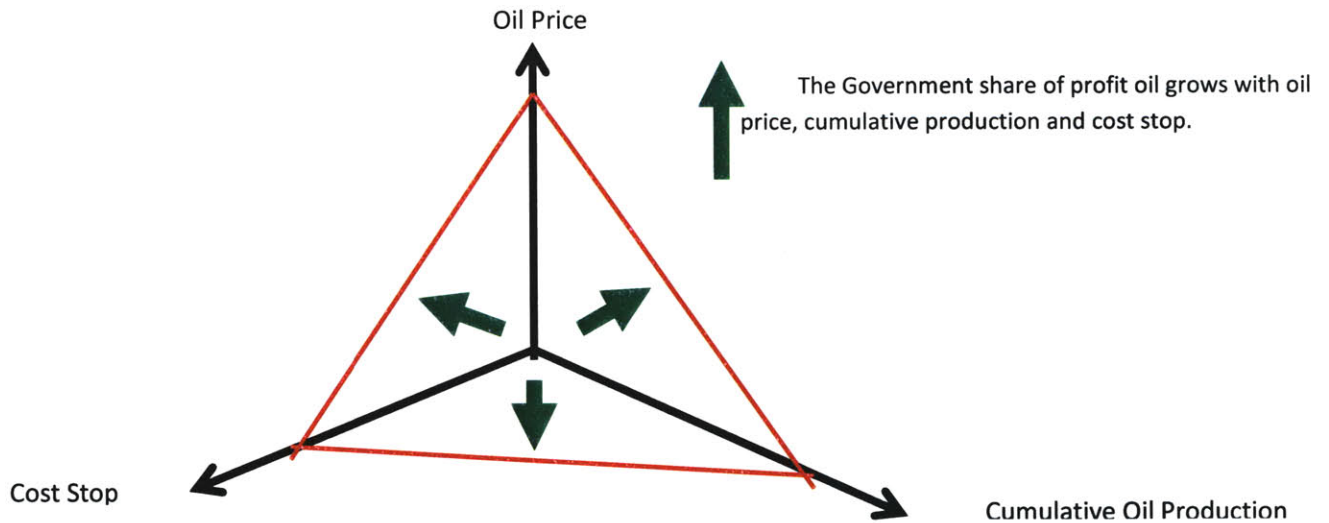
Typical Congo PSC Specifications:

Royalty: 15%
 Cost Stop: 60%
 Government Share of Profit Oil: 40%
 Contractor Share of Profit Oil: 60%
 Business Income Tax: 35%
 Oil Cost: \$ 60
 Government Special Provision (PID) : 1%

<u>Contractor Share</u>	Gross Production = \$ 100	<u>Government Share</u>
		Royalty = 15 PID = 1
	Net Production (100-15-1)= 84	
Oil Cost Recovery = 36	Cost Recovery (60% * \$ 60)= 36	
	Profit oil (84-36)= 48	
Contractor Share of Profit Oil = 28.8	Profit Oil Split (60/40)	Government Share of Profit Oil = 19.2
Taxes = -10.1	Tax on Profit Oil (35%*28.8)= 10.1	Taxes = 10.1
54.7	Division of Gross Production	45.3
18.7	Division of Cash Flow	45.3
18.7 / (100-36) = 29.2 %	Take (after cost oil recovery)	45.3/(100-36) = 70.8 %
(36+28.8)/100 = 64.8 %	Entitlement	(15+1+19.2)/100 = 35.2 %

Source: Adapted from Daniel Johnston

Conceptually, as described below, the higher the production, the cost recovery limit and the oil price, the higher the government share of profit oil as defined by the split sliding scales. Here as for cost recovery, the sliding scales introduce flexibility in the contract, but also, constitute a way of managing unpredictable and changing contract circumstances.



Local content:

Local Content, which is growing in importance in many countries' oil contracts, is surprisingly paid scant attention in Congo's PSCs, both in terms of scope and size.

Three items appear regularly in the country's PSCs:

- i. Contribution of IOCs to training of local staff;
- ii. Hiring of nationals by IOCs;
- iii. Local procurement of goods and services by IOCs.

Local Content is typically mentioned in PSCs in one article among 30 to 40 articles. In the existing PSCs, IOCs offer a training budget for local staff ranging from \$ 100,000 to \$ 300,000 per year. All the contracts give priority hiring to nationals, at similar qualifications at skills. Also, contracts briefly mention the need for IOCs to buy and outsource locally, if the local goods and services providers meet the standards.

Cession of oil equity:

Selling equity in oil project without prior consent of the government is explicitly forbidden.

Contract termination:

The usual term of the contract is the permit duration and validity. However, according to the PSCs, each of the contracting parties can terminate the contract at will, provide that party pays due compensation to the other parties.

Uncertainty management, force majeure and stabilization clauses:

Sliding scales discussed in the context of cost oil recovery and profit oil split are elements of uncertainty management as they introduce flexibility in contracting in the face of uncertain

future oil prices and oil production levels. Congo PSCs systematically include a *force majeure* provision whereby unpredictable and overwhelming circumstances beyond the control of the contractual parties may lead to the suspension of the contract without prejudice to the parties. Congo's model PSCs goes further as to propose a hard form of contract stabilization, namely freezing tax policy for the duration of the contract. In actuality, such an extreme stance is rare; instead, a softer version of stabilization is offered: if the general economics of the project come under severe strains because of unpredictable circumstances beyond parties' control, the parties to the contract shall act in concert to re-establish the ex-ante general equilibrium of the contract.

Dispute Resolution:

International arbitration under the auspices of ICSID (World Bank Group) is the typical venue.

II-3- Sample Literature review: Economic and strategic analysis of PSCs

A. Contracts, Pareto Optimality and Risks Allocation

Blitzer, Cavoulacos and Lessard (1984) define oil contract efficiency from an economist's standpoint: "Contracts are efficient when no changes are possible in their specific terms which would result in net benefits for at least one party and leave everybody else indifferent". They characterize contract efficiency along four dimensions, namely proper allocation of exogenous project risk, appropriate incentives for resource allocation, stability and self-enforceability of contracts, and return maximization by parties to contract.

Kirsten Bindemann (1999) also uses Pareto optimality and welfare economics to define an efficient oil contract; a contract is optimal when it is "impossible to improve one party's terms without making the other party worse off. The efficient contract is then a **non-zero sum game**", as at least one party will be better off without making the other worse off. Bindemann identifies the various uncertainties and risk factors attached to oil contract, including: (i) discovery; (ii) type of resource found (oil or gas); (iii) size of deposit; (iv) economic viability; (v) technological requirements; (vi) oil price uncertainty; (vii) general economic and political risks. Therefore, contracting terms (incentives and penalties) are about the allocation of those risks between the host country and foreign oil companies.

B. Principal/Agent Problems

In the context of PSCs, **Bindemann** (1999) makes the difference between **complete** (impossible because all states of the world cannot be predicted and accounted for in contracts) and **comprehensive** contracts (accounting for relevant future events and making provisions for uncertainty management). What **incentives** are needed to make the agent (agents) act in the interest of the principal? What **monitoring mechanism** can the principal put in place to verify the agent's performance and compliance with contract understandings? How to avoid **moral hazard** and remunerate the agent only when he performs well?

The Principal/Agent model initially developed by **Jensen and Meckling** (1976) is particularly relevant and powerful in the context of oil contracts. Defining the NOC as the Principal and IOC as an agent, the analysis raises the problem of ownership, performance and control. Further, there are **information asymmetries** between IOCs and the NOC, as the former know more about oil information and prospects, due to their skills and technological edge.

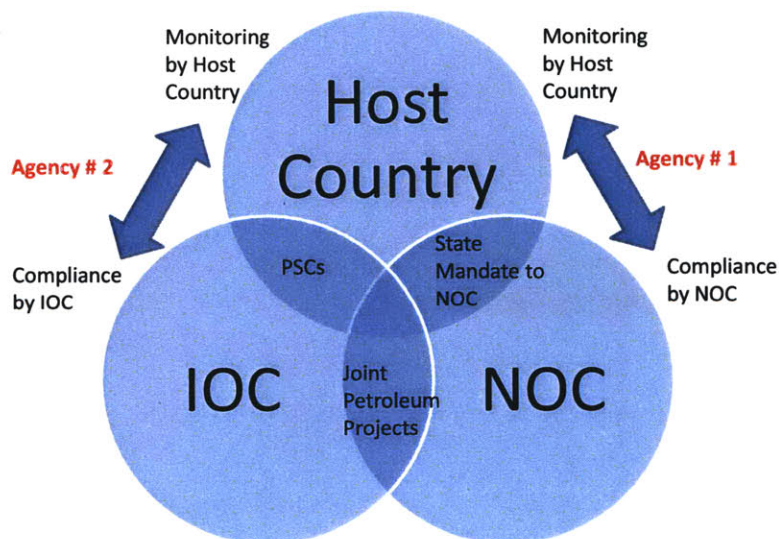
More interestingly, Bindemann also applies the Principal/Agent model to the relationship between the government and its NOC, adding to the asymmetry complexities of PSCs. Clearly, the NOC also can cheat on the government on behalf of whom it acts. In that regard, **Machmud** (2000) has described the excesses of Pertamina, the Indonesian NOC, in the 1970s.

Walde (2002) suggests that exposing the NOC to international competition would maximize their accountability to the government.

Nutavoot Pongsiri (2005) also studies the Principal/Agent problem in PSCs and stresses the conflict of the IOCs (profit maximization) and NOC (economic value maximization or own value/power maximization if they are not perfect agents for the state).

In the graphs below, we attempt to summarize the issues raised by the Principal/Agent model in a generic context:

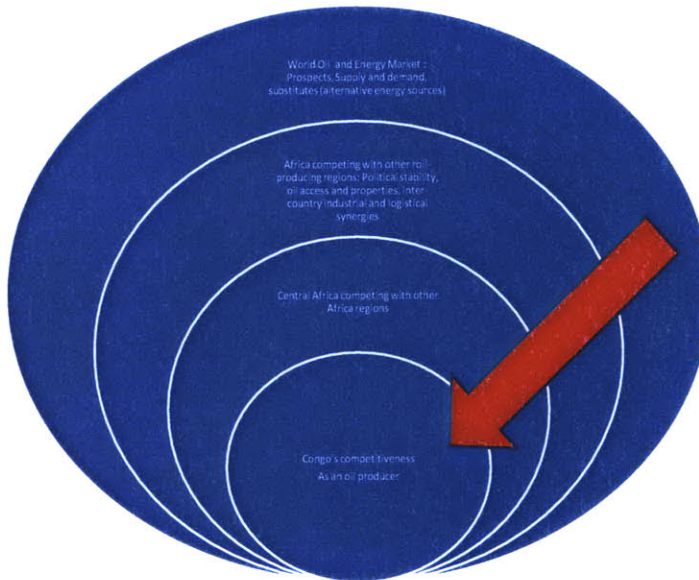
Unbundling Host State and NOC: A Double Agency Problem



C. Upstream Oil Industry Scope and Country Attractiveness

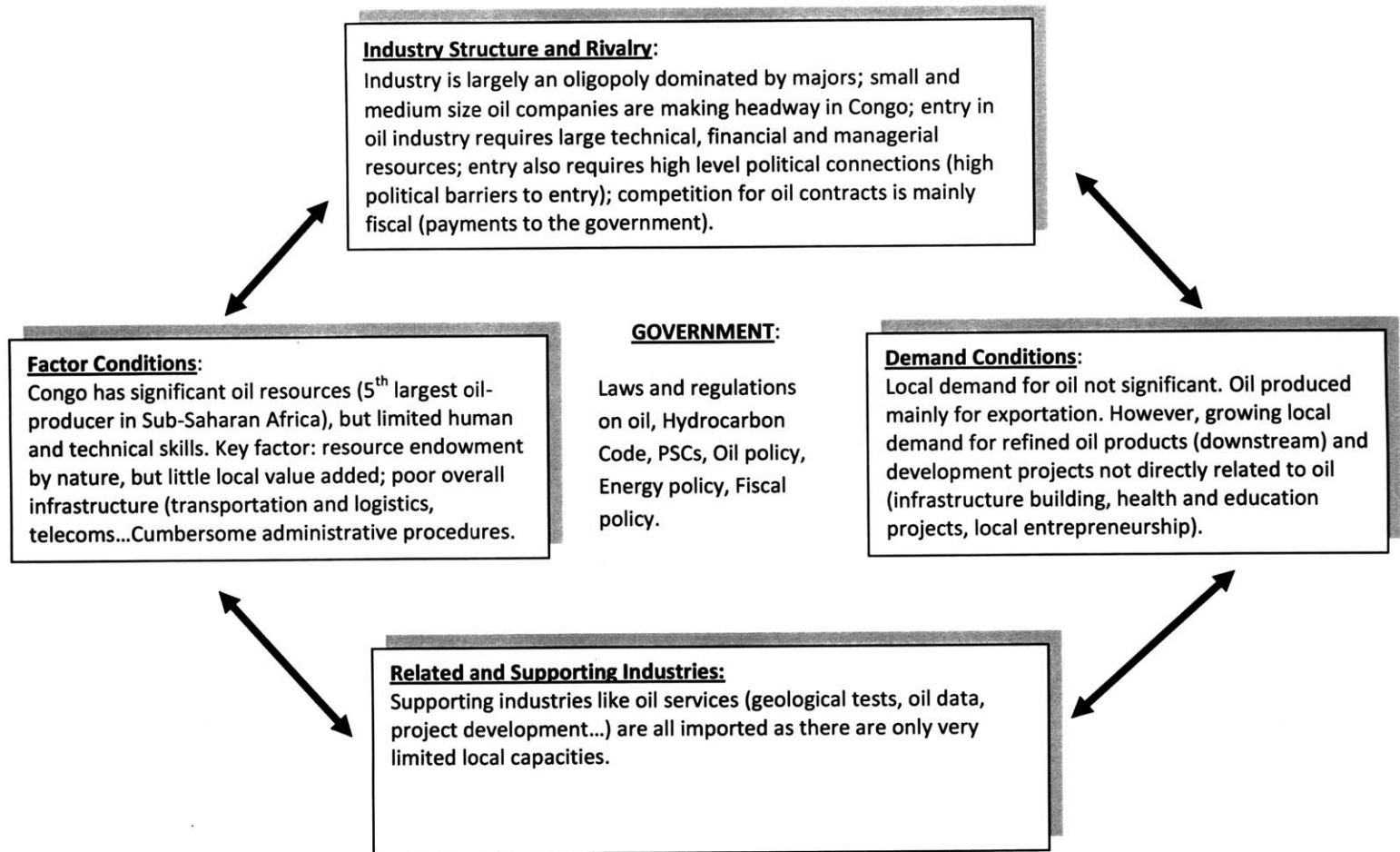
What is the relevant geographic scope of oil industry? Is it the world, the region or the country? The Graph below suggests that it is important to start the analysis at the global industry level, before narrowing it to a specific country like Congo:

Relevant levels of Oil industry and Competition Analysis



- **At the global level:** What are the demand and prospects for oil? What are the substitutes for oil (e.g. renewable energy sources)?
- **At the continental/regional level:** How for instance is Africa competing with other regions of the world (e.g. Middle-East and Latin America) on oil access, political stability and capabilities for oil and supporting activity?
- **At the sub-regional level:** For instance, is Central Africa, the sub-region to which Congo belongs, competitive (access, stability, deposits size, oil properties, supporting industries) as compared to other African sub-regions such as Western Africa?
- **At the country level:** against the backdrop of world, regional and sub-regional criteria, what makes Congo competitive and attractive?

Michael Porter (1990) analyzes the competitive advantage of a country in four dimensions summarized in a Diamond; below, we apply the Porter Diamond dimensions to Congo with regard to oil industry and it appears that the country is attractive principally as a resource holder:



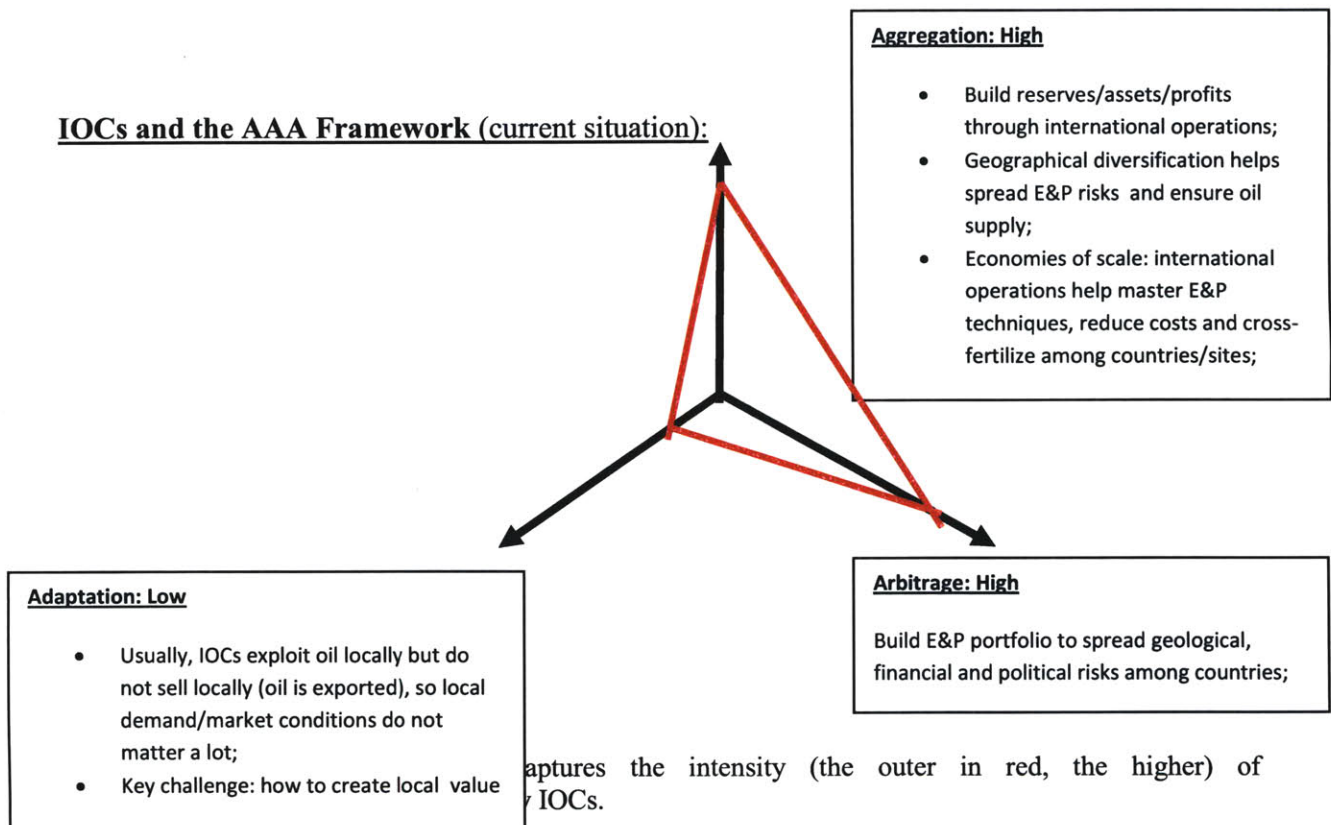
D. Benefits for IOC from Internationalization of Oil Activities

According to **John Dunning's Eclectic Paradigm** (1981) and his OLI Framework, firms would gain from internationalization if have ownership advantage (specific resources and capabilities), location advantage and internalization advantage (cross border fertilization within the firm). The OLI framework describes well oil companies international presence: the need to utilize and expand their technological and financial resources, their access and competitive position in specific geographical areas and their division of risks among different countries drive them outside their home countries which often lack oil in the first place.

Bartlett and Ghoshal (1989) identify market access, efficiencies gained outside and knowledge leverage as driving forces behind internationalization; all the three dimensions apply well to oil industry.

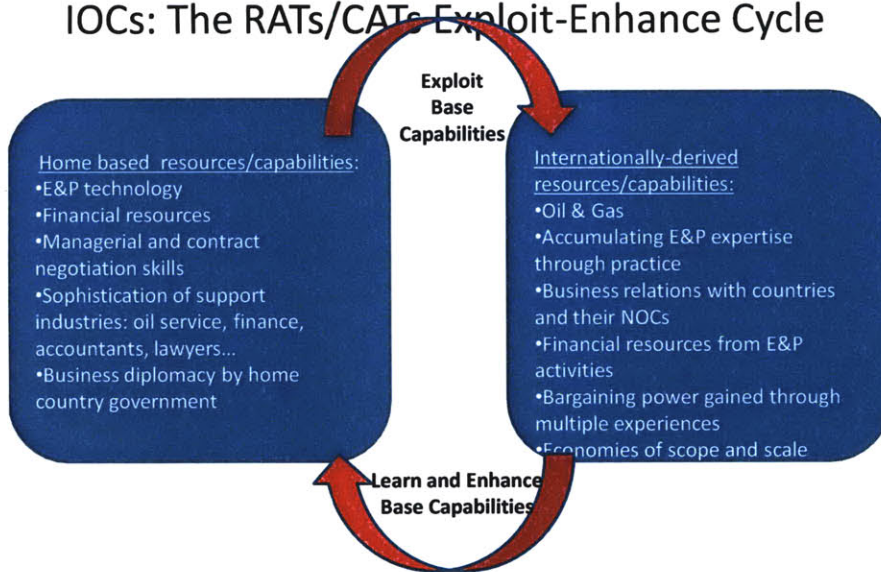
Ghemawat (2007) adding volume and decreasing costs, differentiating, increasing bargaining power, normalizing risk and generating knowledge as the forces pushing towards internationalization (**Value Adding Scorecard**); we think those forces are relevant to the oil

industry. Then the triple challenge is: (i) how can the firm take advantage of the economies of scale/scope (**Aggregation**)? (ii) how can the firm take advantage of differences across countries (**Arbitrage**)? And, (iii) how can the firm adapt its business model, products and services to local markets and create local value? Below we apply the **AAA Framework** to the oil industry:



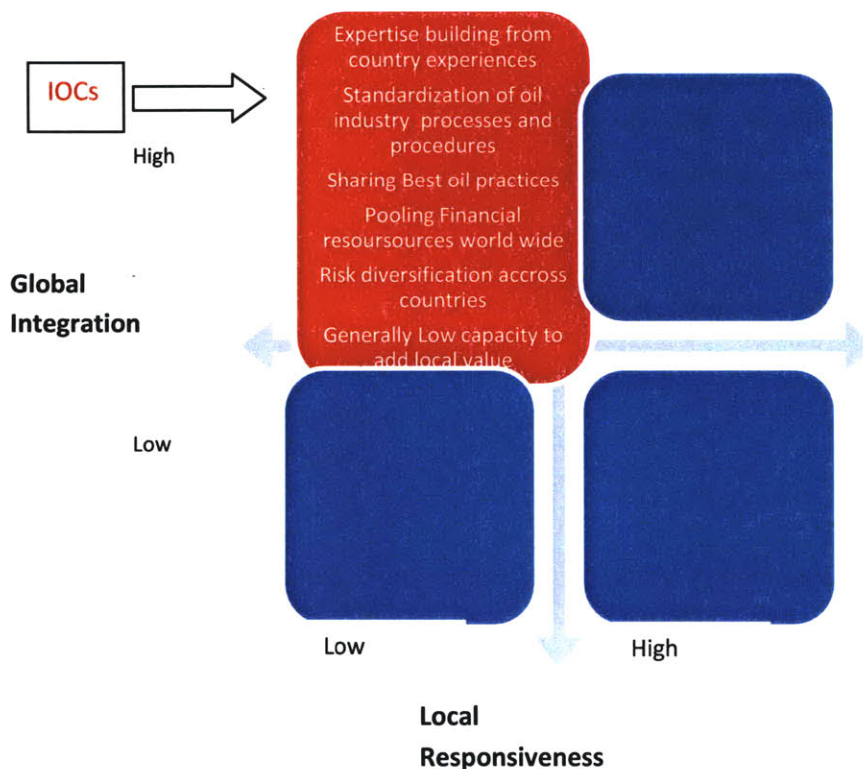
The **CAT** (Complementary, Appropriable and Transferable) and **RAT** (Relevant, Appropriable and Transferable) framework tests a firm's ability to expand its capabilities abroad, and to create and capture value:

IOCs: The RATs/CATs Exploit-Enhance Cycle



E. Global integration and Local Responsiveness by IOCs

Below, we map the IOCs, using the two dimensions defined by **Bartlett and Prahalad (1981; 1987)**; it appears that IOCs, while globally integrated, have limited local responsiveness by virtue of their export-oriented industry:



CHAPTER III: STRATEGIC CHALLENGES AND RECOMMENDATIONS FOR CONGO

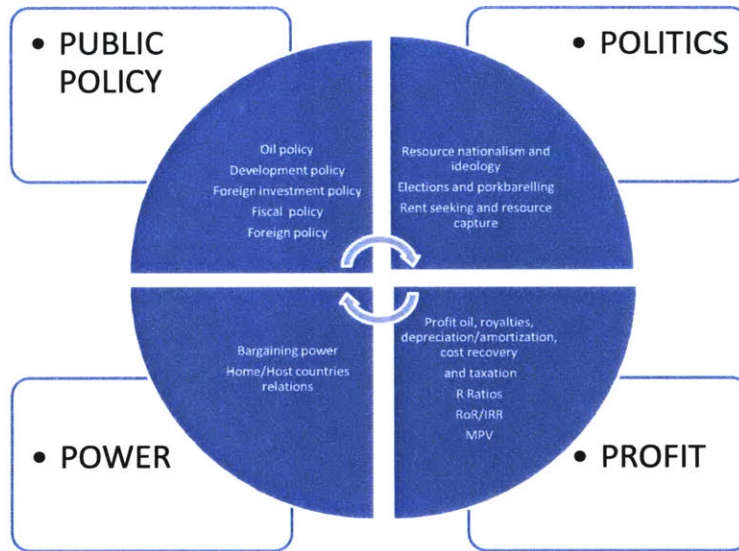
III-1 More Perspectives on Oil Contracts in general

In this section, we expand the analytical perspectives on oil contracts in order to capture the various tensions surrounding them. In our view, oil contracts reflect all of the following perspectives:

- **The geo-strategic perspective:** Oil contracts raise the issue of national energy security;
- **The ideological perspective:** Oil contracts fuel the debate on national ownership of natural resources;
- **The economic perspective:** Oil contracts deal with the creation and distribution of economic rent;
- **The development perspective:** Oil is often seen as a development tool, not only a tradable commodity;
- **The legal perspective:** The issue here is the implementation and enforceability of state contracts;
- **The financial and risk sharing perspective:** Oil projects are selected on the basis of Net Present Value of future cash flows and return on investment (e.g., Internal Rate of Return); oil contracts maximize joint NPV by allocating risk efficiently among parties; A Box below summarizes the key risk and finance concepts in oil projects;
- **The political perspective:** Oil contracts reflect the balance of bargaining power among the contracting parties;
- **The supply chain perspective:** The oil contracting can be seen as a chain of decisions and management phases;
- **The public policy perspective:** Oil contracts reflect countries' taxation and FDI policies.

In an effort to summarize the above tensions, we analyze **oil contracts as the outcome of Politics, Public Policy, Power and Profit Expectations:**

OIL CONTRACTING AS AN INTERACTION OF 4Ps



Oil Project Finance Summary: Time Value of Money, Risk and Return

1- Risks associated with upstream oil projects

- **Political risk:** uncertainties relating to: country institutional stability; predictability of legal system and law enforceability; discretionary government policies (taxes, transfer, assets, domestic minimum obligations, forced local content, non-contractual performance requirements, forced contract renegotiation, nationalization, expropriation);
- **Geological risk:** uncertainties relating to: ease of access; probability of finding oil; size of oil deposits and lifespan of reserves; chemical properties of oil;
- **Commercial risk:** uncertainties relating to “commerciability” of oil (quantity, quality and price)
- **Technological risk:** obsolete production methods can jeopardize safety and lead to sub-optimal oil output, waste and damage to the environment;
- **Economic risk:** exchange rate instability, inflation and volatility of oil price can heavily impact project economics;
- **Operational risk:** project revenues shortfalls; project cost overruns; and therefore project cash flows expectations.

2- CAPM: Cost of capital and the expected rate of return

Projects are financially too costly and risky to be supported by a company's balance sheet. Therefore, a project is financially largely self-sustained (the revenues generated have to cover costs and payoff associated project debt). A company's average cost of capital is the average of its debt costs (R_d) and its equity cost (R_e). The WACC (Weighted Average Cost of Capital) formula is therefore:

$WACC = R_e (E/E+D) + R_d (D/E+D)$, where $(E/E+D)$ is the ratio of equity to balance sheet (equity + debt) and $(D/E+D)$ that of debt to balance sheet.

According to the Capital Asset Pricing Model (CAPM), the expected rate of return on a project encompasses two components: a risk-free rate (R_f) and a premium, namely the difference the market rate and the risk-free rate ($R_m - R_f$). β is a measure of how the project (not the company) moves with the industry. This is summarized in the formula:

$$E(R) = R_f + \beta (R_m - R_f)$$

3- Time Value of Money: Net Present Value

The future stream of revenues and costs (and hence earnings and cash flows CFs) generated by the project over its lifespan (n years) can be appraised in today's dollar value (*Net Present Value, or NPV*) according to the following formula:

$$\sum_{t=0}^{t=n} [CF_n / (1+r)^n] = NPV, \text{ where } r \text{ is the cost of capital.}$$

Important observations/conclusions:

- The initial investment is a negative cash flow at year 0;
- As the net cash flows broadly represent the difference between revenues and costs (qualifier: depreciation), it is important to know how revenues are evaluated and what is included in the costs, and also to make sure that revenues and costs pertain to a specific fiscal year (qualifier: cost carry forward);
- $CF = (1-\tau)(\text{Operating Profits}) - (\text{capital expenditures}) + \tau(\text{Depreciation})$, where τ is the effective tax rate;
- The sequencing of cash flows (time they are in or out) impact the NPV value;
- Positive NPV means that in today's value, the future incomes exceed the initial investment; the higher the NPV, the better the project;
- The cost of capital r is a strategic factor: it indicates the level of risk taken, but also the return threshold. A low r increases the NPV, while a high r decreases it, hence impacting the investment decisions.

4- The Internal rate of Return (IRR)

The IRR is the rate which makes discounted future CFs equal to initial investment (or $NPV = 0$):

$$\sum_{t=1}^{t=n} [CF_n / (1+r)^n] = I_0, \text{ or } NPV = 0, \text{ where } r = IRR$$

Drawbacks: possibility of no or multiple IRRs; future negative CFs

5- Payback Period

Payback period (p) is the minimum time it takes to cash flows to cover the initial project cost (I_0):

$$\sum_{t=1}^{t=n} CF \geq I_0$$

- **Drawbacks:** p ignores the time value of money (cash flows not discounted) and CF after payback period.
- **Alternative:** Discounted Payback using discounted CFs (but still ignores CFs after p)

6- Profitability index

The ratio of discounted future CFs to the initial cost of the project: should be higher than 1:

$$\sum_{t=1}^{t=n} \frac{CF_n}{(1+r)^n} = p \geq 1$$

Drawback: decision mainly based by the size of initial investment.

III-3 Strategic Challenges for Congo

The analysis of Congo's PSCs raises a few **strategic challenges for the country**:

A- Legal consistency

The multiple sources of law pose the legal consistency challenge and may point to the need of revising simplifying and harmonizing the petroleum law; the characterization of the Establishment Conventions as supranational laws and the reluctance of IOCs to renegotiate or scrap them pose a political challenge to the country.

Moreover, Congo may wish to clarify the ambiguity of the legal ownership of oil; on this, PSCs seem to be at odds with the country's Constitution;

B- Lack of technical and administrative capacity

Two aspects of the PSCs seem overwhelmingly complicated for the country's limited technical and administrative capacity. The sophistication of the oil cost recovery and profit oil split schemes (complicated sliding scales and oil price adjustment mechanisms) may not be matched with equal local skills. Congo may wish to build in the contracts the appropriate incentives for IOCs, so that less monitoring and control are required, or even better yet, to include terms that better elicit information from IOCs.

Further, the complexity of cost recovery and profit oil split mechanisms raises the question of the ability of the country to properly execute, monitor and audit PSCs once contracts are signed.

C- Contract transparency challenges

PSCs' reporting on signature bonus payments is sketchy and incomplete. Congo may envisage systematically incorporating such bonuses in the contract, including the modalities of their payment (e.g. schedules). It is not clear how the government negotiates bonuses. While royalty payment is rule-based (15 percent of production), discretion in bonus negotiation and payment may lead to sub-optimal outcomes.

Valuation of oil should be based on an anchor independent of parties' will. PSCs mention consensus approach (between the government and IOCs) on reference oil price. It looks more effective and easier to use the international price of North Sea Brent for instance.

D- The role and accountability of the NOC

The overall role of the NOC, SNPC, is not clearly stated in PSCs, nor is its stake in projects equity. This also raises the question of the transparency and accountability of the NOC to the government, as well as that of the real control the government exerts over the company.

E- Paucity of created local value

There is a clear need to enhance local content in Congo's PSCs. At their current level, local content requirements are just symbolic and nominal. More importantly, without proper local skills, PSCs' stipulations about local hiring and procurement will remain only notional.

III-3 Recommendations

A- Shifting the focus from government take to long term skills development

Government take has traditionally polarized discussions on oil contracts. The government take is often raised for both ideological and legal reasons:

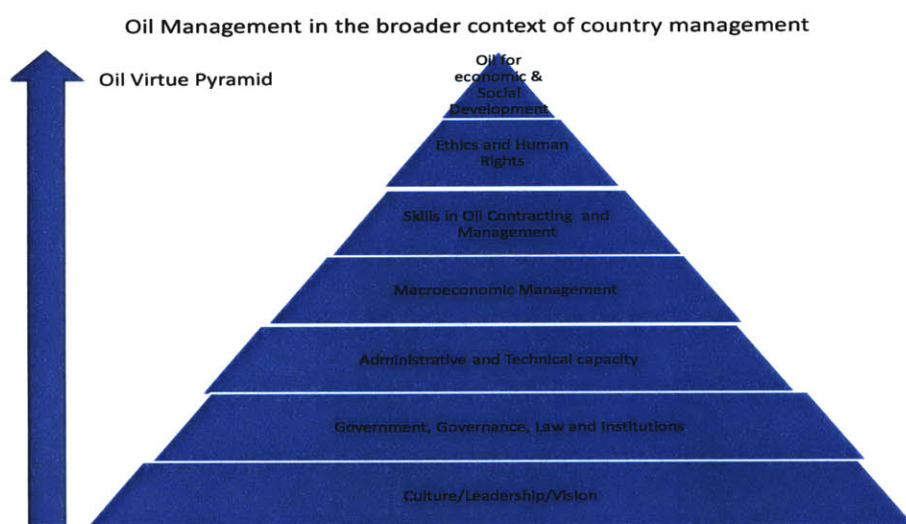
- **Ideological reasons: resource nationalism** has led some countries to claim the size of the government take beyond what is reasonable, ignoring the tremendous financial risks taken by IOCs. In short, the belief here is that the government has to have a majority stake in oil production whatever the circumstances, to assert the country's control over its natural resources. Resource nationalism deters foreign investment and is therefore counter-productive in the long run;
- **Legal reasons:** Many UN General Assembly Resolutions have dealt with the principle of state sovereignty over its natural resources. It is our belief that **the government cannot own what it cannot properly manage**. The definition of oil ownership needs to be broadened to encompass the command of the whole oil chain including oil exploration, production, marketing, and oil contract negotiation and management.

Furthermore, as the government take is generally narrowly defined as the share of oil split once royalty is paid and oil cost recovered, negotiating the split supposes that the government effectively has the required skills to defend its stance on the royalty level and that it is capable of discussing the technicalities of oil accounting (e.g., cost accounting, escalation clauses...) and later of cost auditing. The strategic question should be: as the government share is a percentage, how can it control the base (i.e. oil production) to which the percentage is applied?

Although a critical element of the contract, we believe that government take is secondary to skills building. As a result, a country like Congo needs to prioritize: it is crucial to first build skills in oil negotiation, production and management. This will help the country redress the current asymmetries (knowledge, information, skills, resources) when facing IOCs. With improved skills, the country will then better negotiate and increase its share of oil. In theory, a trade-off between oil share and skills building can also be contemplated, whereby the government would accept a lower take provided that IOCs help the country build oil and managerial skills.

B- Putting oil management in the broader context of country management

It is our belief that oil contracts and management cannot be isolated from the broader leadership, managerial and governance challenges a country may face. To benefit from its oil resources, a country has to have an enlightened political leadership, a clear long term vision for national development, adequate managerial skills, sound legal and institutional frameworks, and a system of accountability and checks and balances. For instance in Congo where oil roughly accounts for 80 percent in the economy, therefore lending to oil significant macroeconomic relevance, oil contracting is only a starting point as the management of oil resources for economic and social purposes becomes more important. We see this as a pyramidal system building from bottom up:

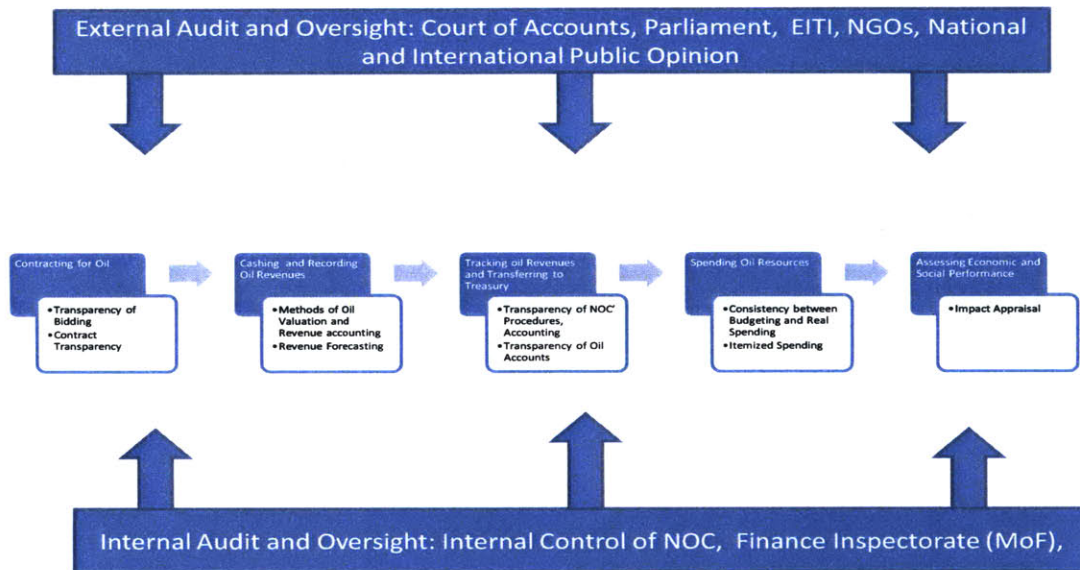


One of the key strategic challenges facing Congo is how to strengthen oil contract management while the broader context requires many fixes.

C- Tackling the oil accountability challenge

Because of the specific role oil plays in Congo's economy and development, and because of the expectations it consequently raises among the population, an enhanced audit and accountability system is needed. In the Graph below, what a reinforced oil governance and accountability system would look like in Congo: a combination of internal and external oversight throughout the management of oil resources:

A Model for Oil Accountability



D- Calibrating Contract Complexity to Country Implementation Capacity

Currently, Congo PSCs seem overly complex to implement and audit, against the backdrop of the country's limited contract negotiation and implementation skills.

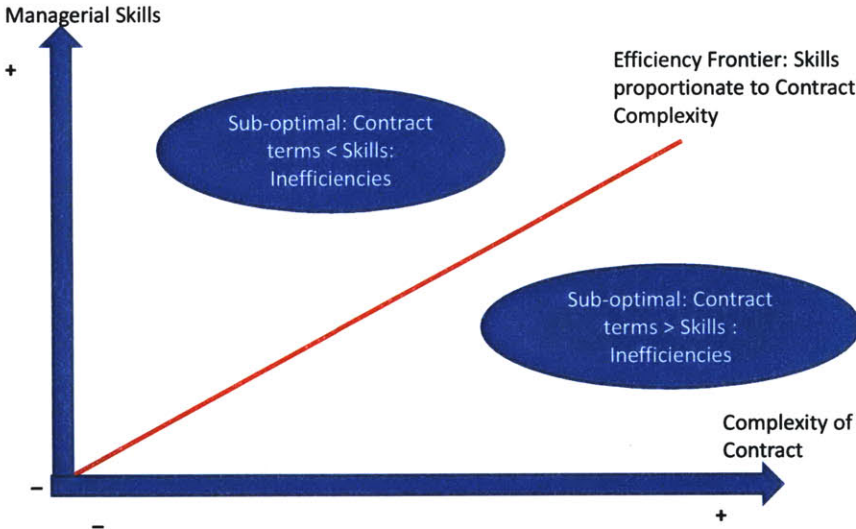
As seen earlier, the PSC encompass items difficult to manage by Congo such as:

- The complex fiscal and accounting terms (e.g., the sliding scales for oil split and cost recovery modalities); we discussed skill asymmetries between IOCs and the NOC;
- The mandate given by the state to the NOC to negotiate with IOCs; we discussed the multiple Principal/Agent problems this poses;
- The mandate given by the state to the NOC the monitor and audit IOCs operations; we discussed skill asymmetries and Principal/Agent problems; furthermore, the irony is that in Congo oil operations are mainly conducted off-shore (tens of kilometers from the coast), and the government does not even have the means to monitor the immediate shores;

Against that background, it would be more realistic and practical for Congo to design less complex and easy to execute oil contracts.

In the Graph below, we theoretically analyze the consistency between implementation skills and PSC complexity:

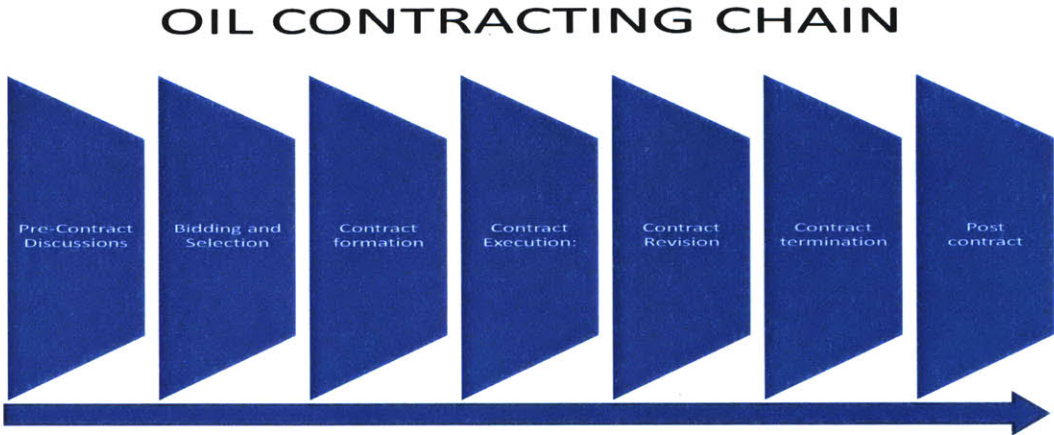
Managerial Skills Vs. Contract Complexity



In an ideal situation (though difficult to concretely measure), the complexity of contract should be aligned with contract managerial skills.

E- Developing Contract Negotiation and Contract Management Skills

Contract negotiation and management requires a specific set of skills. We distinguish broadly seven critical phases in contracting as described below:



The pre-contract phase: formal and information discussions often leading to a memorandum of understanding (MOU) or a letter of intent (LOI). The key question is: what is the legal validity of MOUs and LOIs, otherwise stated, are they legally binding?

Bidding and selection: is it an open bidding or bidding by invitation only? Is it a bilaterally negotiated deal between the government and an IOC? How fair and transparent is the bidding process? What are the rules, procedures and oversight mechanisms that guarantee the integrity of the system?

Contract formation: Is there a common understanding of the contract terminology and key clauses among the parties to the contract? Key clauses relate to work program and related budgets, role of the NOC, fiscal regime and accounting rules, oil valuation, local content, uncertainty management (e.g. , escalation and stabilization clauses, force majeure), and contract law and dispute settlement. As seen, with its limited human resources and skills, Congo has difficulties administering PSCs effectively.

Contract execution: this phase involves the translation of the contract terms into decision and managerial acts, regular reviews and thorough audits of the contract over its duration, but also the necessary adjustment to circumstances as stipulated in the contract. This is the phase when oil is produced, and revenues and cost generated. It is a test to parties' commitment and contract solidity. Proper contract execution is critical, while most of the attention is often paid to contract signing: the contract letter is meaningless if not translated into facts. In the case of Congo, PSCs are often under-executed because of the lack of technical and managerial skills: key clauses go unchecked during the contract life, including in the critical area of effectively controlling IOCs' operations and promoting local content.

Contract revision: although IOCs are reluctant to deep revision of the contract terms for understandable revision (legal uncertainty), contract renegotiations (the extreme revision case) have often been motivated by ideology (e.g., resources nationalism). Contract revision may be seen as discretionary act by the government, tantamount to expropriation, and therefore has a reputational risk attached to it. Between 1994 and 1997, Congo successfully negotiated with IOCs the conversion of most of the concessions into PCSs.

Contract termination: In Congo, PSCs remain valid over the duration of the permits attached to it. A PSC can also be terminated at a party's will, providing prior consultation with other parties, most notably the government, and payment of penalties.

Post contract: for instance the government will make sure that the dismantlement of oil installations, the cleaning of the sites, and the effective transfer to the government of oil data. Audit of IOCs' provisions for abandonment costs is an important part of the audit of cost oil.

Frictions (biases) occur in the contracting chain, for instance:

- Negotiation and selection phases: because of the specific nature of oil as a strategic commodity, contract with an IOC can be seen as an indirect contract with its home country. IOC selection driven by pure market forces or by state diplomacy? By allowing its NOC to contract with an IOC, Congo may be sending a message to the IOC's government with regard to their broader relationship. **Therefore IOC's home country is always the invisible party to the contract;**
- Contract formation: sometime, African countries like Congo can be overwhelmed by the combined bargaining power of the IOC and its home country's diplomacy. In such circumstances, is the contract simply "an agreement between a lion and an antelope"?

Against the above background, how can a country like Congo negotiate oil contracts? The **Harvard Program on Negotiation** distinguishes seven key elements in any negotiation process, namely Interests, Alternatives (including the best alternative to non negotiated agreement or BATNA), Options, Commitment, Legitimacy (standards that support proposals), Communication (e.g. information sharing) and Relationship (e.g. long term focus).

Given the country's current low level of skills, in our view, elements of Congo's negotiation strategy may include the following actions:

- Establish clear criteria to screen candidate IOCs; those criteria may include: (i) Reputation in the industry; (ii) Financial strength and financial sustainability; (III) Technological advance; (iv) Business philosophy and practice; (v) Long term focus and commitment to local value creation;
- Know your interests, your options and your alternatives and try to understand those of the IOCs; it is alleged by the African public opinion that African oil negotiators focus more on their own interests rather than on their country's (Principal/Agent problem) and that the situation has led to sub-optimal outcomes for oil-producing countries;
- Define and understand the IOC's strategy: Is the IOC a short term or long term partner? Is it in investment business (explore, drill, find oil, sell stakes /make profits, and withdraw from the country) or in oil business ("I am here to stay in oil")? The recent Ghana/Kosmos/Exxon conflict lends relevance to such a preoccupation, because Ghana and IOCs did not have the same understanding of contract terms relating to equity cession;
- Auction oil contracts and play the competition; minimize bilateral negotiations with IOCs;
- Promote local value creation, including, among other things, training, knowledge transfer, cooperation with NOC, local employment, local entrepreneurship, and economic development cooperation as IOC selection criteria;

- Systematically involve the domestic oversight bodies (Parliament, Court of Accounts and Public Opinion) and disclose key contract clauses to minimize negotiation mistakes;
- Learn from other developing countries to keep abreast of new developments in oil contracting and develop South/South strategic cooperation to learn about petroleum activities (e.g. with Brazil, Indonesia and Malaysia);

Embed NOC and IOC technical and strategic cooperation (transfer of oil skills; joint development projects in country and outside; training...) in contracts;

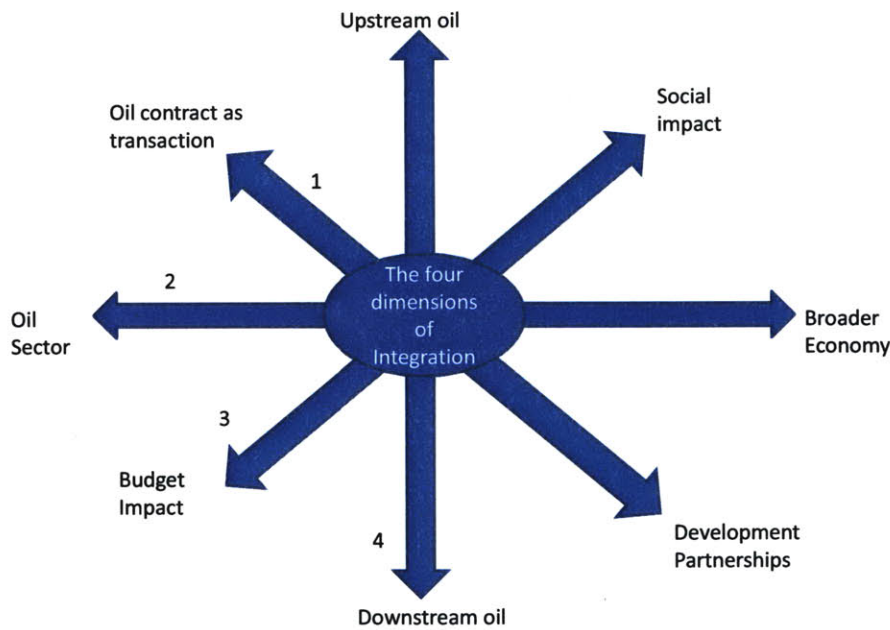
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- Systematically hire consultants to help negotiate oil contracts and implement them: marginal benefits of hiring will largely exceed the marginal costs; contract implementation includes monitoring and taxing oil production. Congo needs to address the current imbalance in skills and information asymmetries between it and IOCs; the challenge for Congo is to ascertain oil production and oil costs;
- Hire audit firms to systematically audit oil costs, and associate NOC and government auditors to the audit process for them to gain understanding of the relating techniques. In Congo's current circumstances with multi-dimensional asymmetries between the government and IOCs.

F- Integrating oil and the rest: A 4-Dimension integration policy

We believe that Congo should consider its oil and development policies through four strategic lenses:

- **Integrate oil contracting and development policies:** here, the idea is see oil, a finite resource, as a development tool, not just as a tradable commodity, and to organize development policies around that strategic commodity;
- **Integrate oil and the broader economy:** economic literature on oil curse and the Dutch Disease points to the destructive effect of ill-managed resources. Inflow of oil money creates domestic inflation and cause the currency to appreciate, thus hampering exports. Moreover, sectors like agriculture and manufacturing might be adversely affected as result. Against that background, it is crucial to integrate oil in the broader economic policy of Congo. For instance, the government can use oil windfall to build financial assets, save for future generations or diversify the economy in anticipation of oil depletion (in the current circumstances, Congo oil reserves are estimated to last 22 years).;
- **Integrate oil budgeting and social budgeting:** the efficiency of oil management cannot be measured in budgetary terms, but rather through the real social impact of oil resources dedicated to poverty alleviation;

- **Integrate upstream (E & P) and downstream (distribution) oil activities;** in recent years the policy of integration has partially failed as the national refinery CORAF (capacity: 20,000 to 30,000 barrel a day) has been bailed out by heavy government subsidies (2 percent of GDP in 2007). Although, the level of subsidy has considerably diminished recently, CORAF has been chronically unable to meet the local demand for refined petroleum products. The refinery indeed lacks capacity and suffers from obsolete equipment and poor management;



The Table below summarizes the four dimensions of integration:

The 4 Dimensions of Integration and the Resulting Challenges (continued)

D1: NEGOTIATION CHALLENGE

- Contract as development partnership with long term focus
- Skills and know-how transfer by IOCs
- Capacity building for NOC
- IOCs invest in education, health, infrastructure, local entrepreneurship
- Local content policies (hiring, promoting, outsourcing, procuring)
- CSR and Corporate citizenship for NIOs
- **THINK PARTNERSHIP, NOT CONTRACT**

D2: CROSS-FERTILIZATION CHALLENGE

- Breaking the “oil curse”
- Oil as growth engine for sectors such as agriculture, infrastructure, transportation, services
- **THINK MACROECONOMICS, NOT SECTOR ECONOMICS**

D3: TRANSFORMATION CHALLENGE.

- Managerial capabilities and skills
- Efficiency and Ethics in public management
- Management of oil funds, stabilization funds...
- Audits, accountability transparency, and oil governance
- Redistribution policies
- **TIHINK PHYSICAL AND HUMAN CAPITAL, NOT REVENUES**

D4: INDUSTRIAL INTEGRATION CHALLENGE

- Development of national upstream and downstream oil expertise and sectors (E&P, refinery , storage and transportation capacity...);
- Integration of oil policy within the broader energy policy (electricity, renewable sources...);
- Clarity and coherence of long term energy policy (means, complementarities).
- **THINK ENERGY, NOT OIL**

G- Addressing the oil sustainability challenge

We distinguish and summarize the 4 dimensions of sustainability in the Graph below; these include:

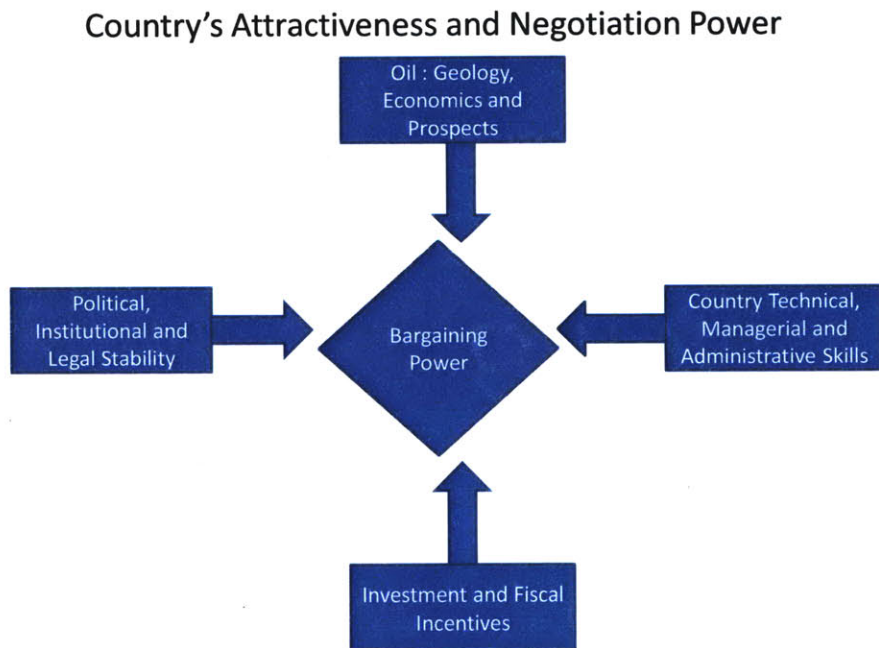
- Political sustainability;
- Fiscal sustainability;
- Legal sustainability; and,
- Developmental and environmental sustainability.

Oil Management and the Sustainability Challenge



H- Defining the factors of Congo's comparative advantage

In the Graph below, we propose elements of a **modified (Porter) Diamond** for Congo in the context of oil contracting:



Congo's attractiveness as a destination place and bargaining power with IOCs will hinge on four sets of criteria the government needs to be aware of:

- **The specifics of country:** political risk;
- **The specifics of country's oil:** geological characteristics, access to oil, deposits size, oil properties, expected return on investment;
- **The Incentives to attract foreign direct investment:** legal, regulatory and tax incentives;
- **The country's administrative skills and capabilities:** knowledgeable and responsible counterparts; local assistance and support to IOCs (oil services/sub-contracting ability; local logistical infrastructure, such as oil transportation and storage capabilities; local manpower and skills...)

CHAPTER IV: STRATEGIC CHALLENGES AND RECOMMENDATIONS FOR IOCs

IV-1 Why IOCs need a new business philosophy and model in Africa

A- Competition for African oil is growing

Recent years have witnessed a profound change in the African oil landscape. First, a new scramble for African energy resources is underway and traditional Western IOCs are now facing the direct competition of emerging markets oil companies, including from China, India, Brazil, Russia and even South Africa. Moreover, significant discoveries of oil have been made on the African coasts (Ghana, Cote d'Ivoire, Sierra Leone, Liberia), adding to the long list of African oil-producing countries. Uganda, Mozambique and Tanzania on the eastern coast may soon join the club. In a nutshell, Africa is an increasingly important player in world petroleum affairs. In a recent past, Brazilian, Russian and South African oil companies have made foray into Congo; oil investments from the Arab Emirates are also contemplated. This places pressure on the entrenched oil companies (TOTAL, ENI, and Chevron) to innovate for them to beat the competition. Although there is no real strategic coalition of African oil-producers (an association, APPA, is somewhat dormant) to increase the countries collective bargaining power, the new context characterized by enhanced rivalry among nations and companies may also lend more bargaining power to African governments.

B- China's business model in Africa prompts a new strategic thinking

China oil companies are making headway in Africa, with apparently the full support of their government. The Chinese business model is to trade oil (from Africa) for money and infrastructure (to Africa). It therefore has a barter component. Further, the Chinese state banks and import-export agencies make loans available in proportions that cannot be matched by Western governments and multilateral lending institutions like the World Bank or the IMF. The latter institutions are generally unpopular because of their stringent lending rules and conditions attached. They also generally lend much less significant amounts of money, hence making Africans think that their loans cause much pain with little gain. In this context, the Chinese firms may be part of a broader economic, diplomatic and political strategy aimed at building energy security and broader access to Africa's minerals. The strategic dimension of oil thus gains more relevance. Because of thirst for transportation and energy infrastructure and of the perceived easier access to Chinese funding (seemingly no conditions imposed and no political strings attached), African governments are attracted to the Chinese business model. China smartly packages its policies as those of just another "developing country" mindful of Africans' needs and respectful of their national sovereignty. China's approach challenges IOCs to offer Africans more than oil partnership, and to also integrate countries' development needs in their own corporate strategy.

C- Africa's internal power dynamics are changing

Political ties of the ruling elites with the former colonial power have sometimes given the latter's oil companies a competitive edge. For instance, it has been often argued that TOTAL's lead in many French-speaking African countries reflects the still significant influence France retains over the governments of those countries. Younger African generations are better educated, more aware of world affairs, more demanding in terms of government efficiency and accountability, and thus less prone to sentimental ties with ex-colonizers. More importantly, the often intriguing dichotomy between some countries' oil revenues and their scant development achievements is a political and social time bomb. The wider that gap, the harsher the ideological debate about the political and economic role of IOCs in Africa. Demand for transparency and accountability is growing. Indeed, both local NGOs (e.g. Publish What You Pay coalition) and international ones (e.g. Global Witness) are campaigning to promote transparency in oil management. They have been very active in Congo, obliging the World Bank and the International Monetary Fund (also known as Bretton Woods Institution, or BWIs) to dedicate more attention to oil reporting and governance in their programs with the countries. BWIs strongly advised Congo to also adhere to the principles of the Extractive Industry Transparency Initiative (EITI). In that connection, BWIs demanded that Congo PSCs be posted on the Internet. Furthermore, institutions such as Revenue Watch in New York recently sponsored a study that advocates transparency and the end of confidentiality clauses in extractive contracts. The challenge for IOCs is how to build credible and sustainable local constituencies, in order to mitigate long term political risks.

Beyond the changing contextual circumstances, IOCs have to face challenges directly related to the way they are perceived and to the actions.

IV-2 Summary of key strategic challenges facing IOCs I Congo

A- Image and communication problem

Misunderstandings persist about the roles and strategies of IOCs in Congo. Oil business has suffered a reputation for opaqueness. Fantasies and conspiracy theories abound regarding their supposed tendency to corrupt government officials, meddle in countries' internal affairs and avoid national and international oversight. Even further, some observers claim that the country's civil war in 1997 was partly fueled by both domestic and foreign rivalry to capture the oil rent. Moreover, in Congo, the perception is that the Government, not the people, is the sole constituency of IOCs, because of their limited dialogue with the citizens. Any accusation of government's mishandling of oil money also reflects on the reputation of IOCs. On the other hand, the government's largely inconclusive attempts to renegotiate in its favor the fiscally generous 1968 Establishment Conventions with IOCs has led to question IOCs' commitment to the country's laws, sovereignty and development. Clearly, IOCs are facing communication challenges and it is urgent for them to look less political and to enhance their local image.

B- Corporate social responsibility and corporate citizenship: facts or fads?

In Congo, local communities and NGOs alleged that IOCs and the government colluded to deliberately underplay the damage caused to the people and the environment by petroleum activity in some southern shore localities. Also, the analysis of Congo's PSCs have shown that the local content provisions were more notional than real. Indeed, the amounts dedicated to the training of Congolese are absurdly low as compared to the country's huge needs; secondly, the lack of national skills in oil matters makes the clauses on local employment and procurement illusory. Furthermore, compliance with Congolese tax and customs laws may be enhanced as IOCs represent the bulk of exemptions deriving from special regimes.

C- The challenge of oil contract sustainability

Changing international competition landscape and internal African dynamics may pose a challenge to existing oil contracts and future ones. The difficulties that arose during the negotiations between the government of Ghana on the one hand, and Cosmos and Exxon on the other, as well as China's recent offer to outbid and take over oil fields from Western companies in Nigeria, are indicative of the growing assertiveness of African governments, and also, possibly, of their bargaining power.

So far, PSCs have dealt with contract sustainability with a legal tool: the stabilization clause, by which the contract fiscal terms and law are frozen over the duration of the project; softer version of stabilization clauses provide for commitment to re-establishing the ex-ante general equilibrium of the contract, should compelling circumstances occur and alter the original contract.

Stabilization clause does not equate with contract stability for the following reasons:

- According to the international law on foreign investment, the government has the power to expropriate or nationalize, provided it pays prompt, adequate and effective compensations (the so-called Hull Formula); other conditions include the respect of due process of law, the absence of discrimination and the public purpose of the action. Therefore, within certain legal limits, the government can take direct or indirect adverse actions ("*tantamount to expropriation*") that can alter or breach a contract;
- Arbitration, the usual dispute settlement venue, is costly in terms of time, money and reputation for both the state and IOCs. But in the process, an oil company seems to have more to lose than the state because oil is a sovereign good (ownership by the state) and the investment is in the state territory.

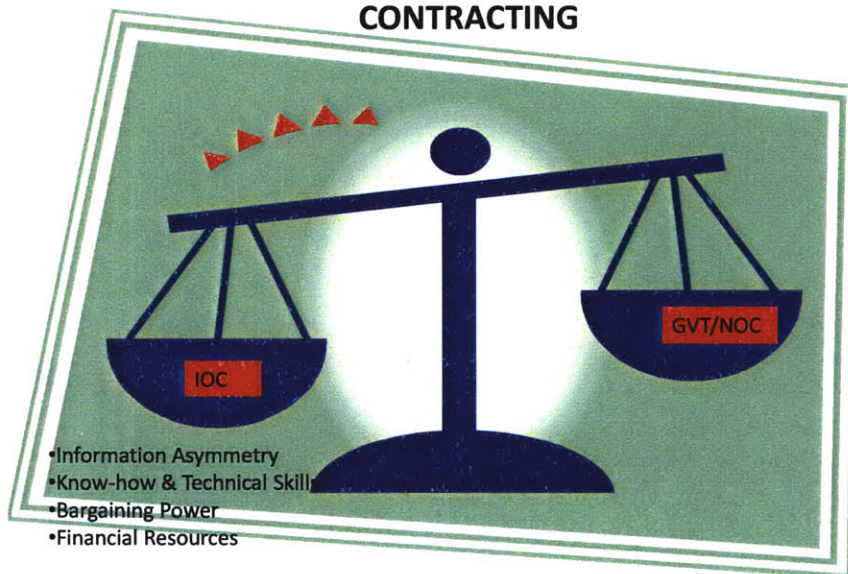
In one instance, Congo carried out protracted contract renegotiations with Total in the late 1990s. The government initiated the renegotiation because it felt that a deal under a former government was not fair to the country. The two parties eventually reached an agreement under which Congo was compensated, albeit at a level much lower than its initial demand. Therefore, factors like political stability, perception of fairness and clarity of initial contractual understandings are key to ensuring contract stability.

D- Power and skills asymmetries create an unsustainable advantage over host country

In our discussions with Congolese oil officials, it appeared that they generally resented that oil contracts suffered from three types of asymmetries at their disadvantage:

- **Information asymmetry:** IOCs arguably know more than the government about the geochemical properties of oil, the reserves size and physical characteristics, and hence the real cost to produce oil and the quality of oil;
- **Skills asymmetry:** On average, African government and NOC officials lag behind their foreign interlocutors when it comes to technical, financial, accounting and legal skills so vital to oil contracts.
- **Power asymmetry:** IOCs sometime advance under the shadow of their home state. Their sole financial and technological power is already considerable. The intervention of their home states in the bidding and contracting yield an overwhelming power to which few African countries can resist, in fear of overt (scaling back or postponement of the disbursement of official development assistance) or subtle (e.g., support for IMF and World Bank loans) diplomatic and financial retaliation. Although not stated, those factors are present in the mind of the negotiators of both sides.

PERCEIVED IMBALANCES AND IMPLICATIONS FOR OIL CONTRACTING



Some IOCs might be under the misleading impression that skills and power asymmetries give them an upper hand in contract negotiation with less-skilled African countries. The psychological uncertainty and mental insecurity this creates can in turn lead to relationships tainted with suspicion and to permanent questioning of contractual terms. That lack of trust and sincere commitment can cause contract instability. Moreover, it is in the very interest of IOCs to negotiate contracts with knowledgeable but tough counterparts, rather than easy and non savvy ones who can commit to terms they can neither understand nor deliver.

More generally, African oil contracts have been questioned on the following legal grounds:

- **Good faith:** in light of the extent of information asymmetries as described above, were the PSCs signed in good faith?
- **Consent:** most countries acceded to independence in or around 1960. Did countries blindly accept some contractual terms such as Congo's 1968 Establishment Conventions with IOCs?
- **Fairness:** given power asymmetries between the IOCs and the government, how fair are the PSCs?
- **Duress:** Is the needy and largely unstable Africa entangled in a pressure web made of loans, grants and aid, diplomatic and military support, free to contract?
- **Legality of contract and legitimacy of parties to contract:** how sustainable are oil contracts signed with undemocratic regimes whose decisions and actions went unchecked?

As seen above, the debate on contract stability stretches much further than the legal province.

IV-3 Elements of a tentative new strategy for IOCs

In this section, the following issues will be discussed:

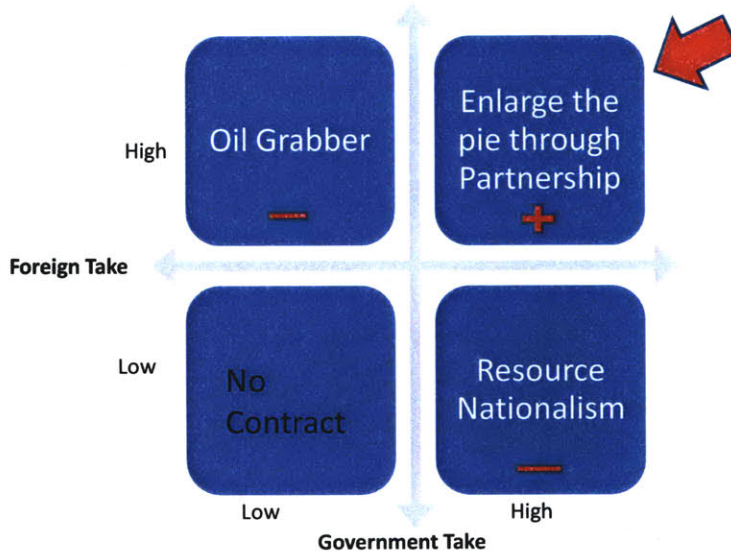
- Proposing a new business philosophy and model for IOCs
- How to promote contract stability
- How to beat the competition in Africa

A- A New business philosophy and model

At a generic level (Congo 12 PSCs do not allow a significant statistical analysis), in the Graph below, we try to capture the **tension caused by the split of oil between the government and IOCs**; three questions then arise:

- Is the government/IOCs split a zero sum game (IOCs take diminishes government take and vice versa). Or,
- How can the two parties both increase their shares?
- What are the potential winning and losing strategies?

Foreign Take Vs. Government Take: Winning and Losing Strategies



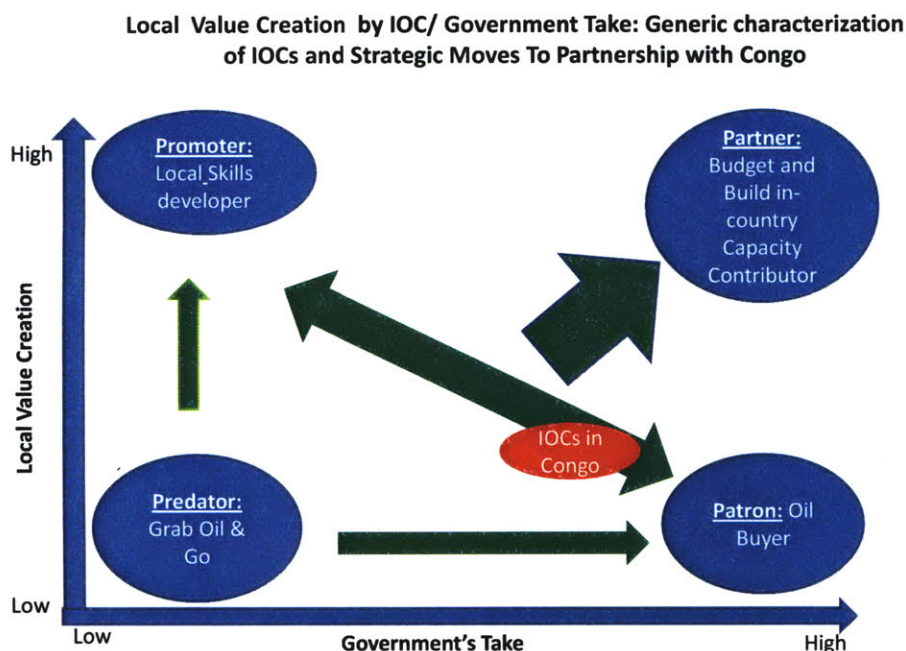
The analysis of the matrix quadrants lead to the following conclusions:

- The situations where only one party consistently has a high take and the other a low one create an imbalance which may not be sustainable for political (country) or strategic (IOCs). Moreover, a game where one party consistently wins and the other consistently loses may become less attractive to the losing party who may seek to change the rules of the game (e.g., government through contract renegotiation), or play a different partner (e.g., IOCs through geographical diversification, or country through new business partnerships). If IOCs consistently have a greater share, it can be perceived as an oil grabber. Conversely, a government that always claims the greater share can be described as resource-nationalist and deter foreign investment.
- Partnership to increase both parties' share is the most sustainable strategy. If defined not in the narrow fiscal terms of profit oil split, but in the broader meaning of financial and intangible benefits (e.g. increased local content, knowledge transfer by IOCs, public private partnerships on development projects...), then both parties can improve their shares and satisfaction. This strategy transcends one single oil transaction or contract, and translates into a long term partnership between the country and IOCs, on oil and development initiatives (e.g. IOCs helping on country's energy policy).

Extending the analysis of IOCs' contribution beyond oil split and payment of taxes, another tension may appear outside IOCs. That tension involves **local value creation** by IOCs: are government's take and local value creation by IOCs exclusive or mutually reinforcing? In theory, the two can be competitive to gain IOCs' favor (IOCs may negotiate with governments a trade-off between higher government's take and higher local content for instance).

The concept of local value creation is broader than local content which is more of a contractual performance requirement. Local value creation encompasses tangibles and intangibles benefits created by IOCs. This can take the form of knowledge transfer to the NOC; training of local officials in oil management; salaries and rents paid locally; goods and services procured locally; business taxes paid to the government; infrastructure built by IOCs; financial contribution by IOCs to local communities; in-kind donations to populations; fellowships and internships offered to students. The higher the local value, the more integrated to the country, the better the corporate citizen of the country.

At a conceptual level (no statistical analysis available to substantiate categorization), the extent to which IOCs trade on both the government's take and local value creation led us to distinguish four extreme categories of IOCs (reality is a mix): **Predators, Patrons, Promoters and Partners**, as described in the Graph below.



- Low government take/ Low local value creation: **Predators** who grab oil and go. They are in the country just for oil. They maximize their share of profit oil and do not care about creating local value;
- High government take/ Low local value creation: **Patrons** who pay high oil bills to the state and stick to oil activities only. They pay for what they consume, but for nothing more. They may think that they paid their dues and have nothing more to contribute;
- Low government take/ High local value creation: **Promoters** who develop local skills through training, local employment and knowledge transfer. In countries like Congo, emerging market IOCs such as PetroBras of Brazil and PetroSA of South Africa try to

differentiate themselves from competition by offering higher local value creation (“South/South cooperation”) and proposing a lower share of oil. In a nutshell, their entry strategy is a combination of lower price and higher service;

- High government take/ High local value creation: **Partners**; that would be the ideal for countries like Congo who needs both more budget resources and oil skills. Chinese oil companies strive to sell themselves to Africans as the perfect partners, although reality suggests otherwise.

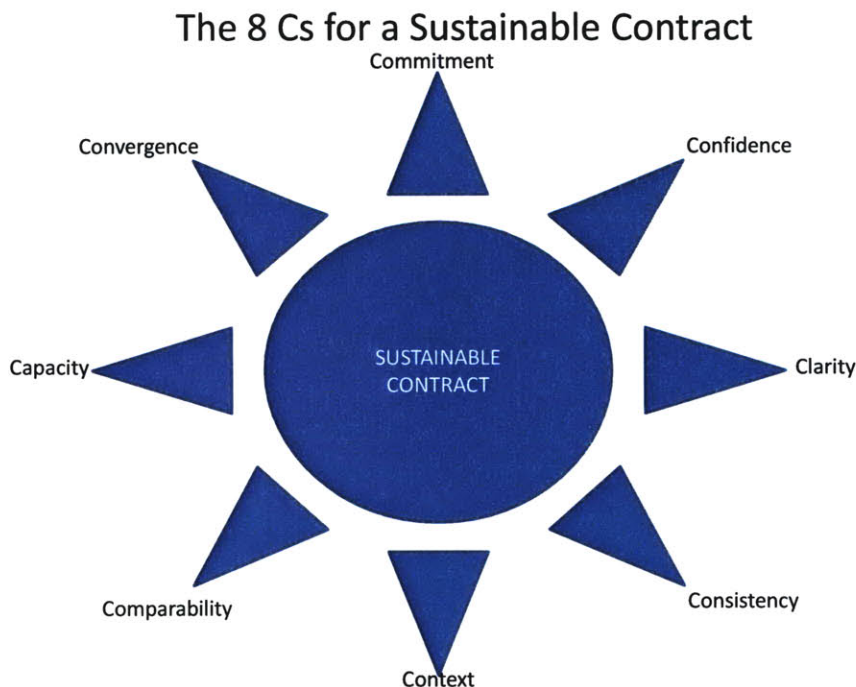
With regard to government share, Congo PSCs seem to generally grant the state a relatively “fair share” of oil, with escalation clauses helping to increase it as production and oil prices increase. However, IOCs operating in Congo very much stick to PSC stipulations with regard to local value creation (in fact limited to PSC performance requirement on local content). As a result, they behave more like “Patrons”.

Strategic moves to become a Partner Ideal situation for host countries):

- A Predator needs to first transform itself into both a Promoter and a Patron;
- A Promoter needs to add Patron’s characteristics;
- A Patron needs to add Promoter’s characteristics.

B- Promoting contract stability

So far, contract stability has been implemented by way of inclusion of a stabilization clause. As discussed earlier, stabilization clause may not lead to contract stability. In the Graph below we propose a new model that contemplates eight dimensions of contract sustainability:



We identify eight normative or prescriptive elements of contract sustainability include:

- **Commitment:** parties to the contract should be sincerely committed to their duties and obligations. Psychological and moral commitments are as important as legal commitment. Time will test commitment;
- **Confidence:** the parties to the contract should trust each other and should not doubt of the other party's good faith;
- **Convergence:** government and the IOCs should strive to align their respective interests to avoid later grievances; convergence of interests guarantees long term cooperation;
- **Clarity:** To avoid miscommunication, misinterpretation and renegotiation attempts, the parties need to have a similar understanding of the contract terms;
- **Consistency:** legal consistency helps avoid confusion regarding the authoritative source of contract law; in countries like Congo, petroleum activities are government by the Hydrocarbon Code, the Establishment Conventions, special Tax and Custom regimes, and even the Constitution. It is crucial to establish the consistency among those multiple legal sources and to determine the hierarchy of laws. Furthermore, the enforceability of contracts make their letter and spirit consistent with the facts, otherwise, contracts have no substance;
- **Context:** petroleum contracts are contextual (i.e. specific to country at a point in time); the circumstances in which the contract has been signed might change over time. As a result, the contract should include some flexibility mechanisms to allow for orderly revision when new circumstances so require. Illustrative examples include sliding scales for oil sharing, clauses that adapt the contract to new economic realities, and, at the extreme, *force majeure* that recognizes overwhelming circumstances. From that standpoint, model contract should not mean uniform contract;
- **Capacity:** contract complexity should be calibrated to parties' implementation capacity. In the case of Congo, the monitoring roles assigned by PSCs to the state via the NOC are only notional, as the country lacks the administrative skills and technical capabilities to oversee the activities of IOCs. From that standpoint, the practical meaning of the relating clauses is questionable. One can speculate that if information asymmetries currently in favor of IOCs were redressed through a better monitoring of oil activities (data, production, valuation, and notably) by the government, there might be an attempt by the state to reconsider their relationships with some foreign oil companies;
- **Comparability:** in a more and more open world, countries may be tempted to compare the terms of their oil contracts with those of other countries, to ascertain whether they negotiate well and get the best of the deals. Other country circumstances vary as discussed, it is a natural tendency to check whether the neighbor's grass is greener, and hence to try to renegotiate existing contracts. In like circumstances, countries will more

and more seek similar treatment. For instance, African countries feel they are generally worse off Latin American or Asian oil-producing countries, when it comes to the government share.

C- Shifting contract focus from single transaction to cooperation

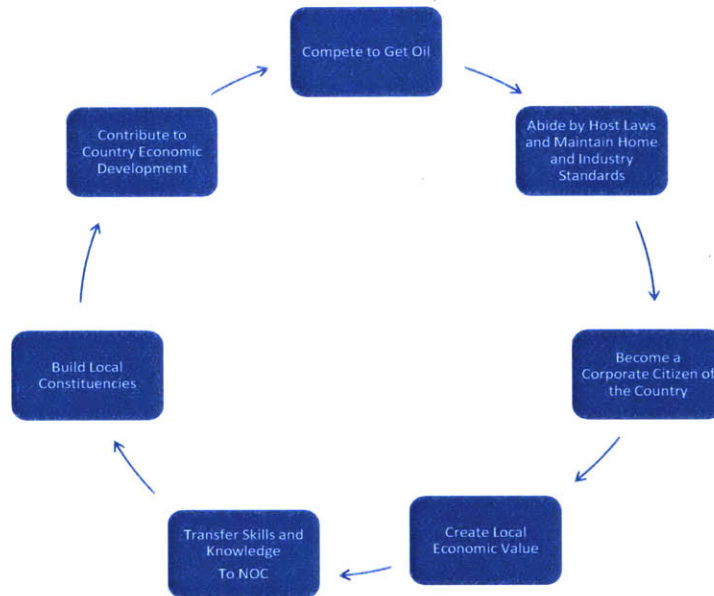
Oil transactions are essentially based on individual contracts whereas cooperation and partnership with the country has a broader scope and impact. For instance, because of its expertise in energy related issues and extensive business network beyond oil, IOCs can help Congo:

- Solve its chronic energy supply problems (both gasoline at the pump and electricity);
- Better integrate upstream and downstream oil activities;
- Help SNPC, the NOC, build skills in oil management, accounting, projections, audit and marketing;
- Train Congolese oil executives;
- Help Congo redesign and manage its national refinery, CORAF;
- Contribute to physical (e.g. roads) and social (schools, hospitals, water sanitation...) infrastructure building;

Although only notional in Congo because of the scant amounts involved (IOCs training budget for nationals run between \$100 K to \$ 300K) and because of the fact that the country does not have skills to match PSCs requirements pertaining to local procurement and employment, local content has long perceived by IOCs as a constraint, because it is often embedded in the contract or petroleum legislation. As discussed earlier, local value creation encompasses both tangible and intangible contributions of an IOC to the host country. Instead of being a deterrent, local value creation can be an opportunity, as it helps an IOC to get locally entrenched and to build its local constituencies (business, social and political), hence gaining a competitive edge.

In the Graph below which captures the main concerns raised earlier with regard to IOC/country partnership, we propose the elements of oil business sustainability:

Business Sustainability for IOCs



Further, for an IOC, becoming a full corporate citizen of a country also involves:

- Maintaining IOCs' business ethics and standards abroad;
- Caring the traditional Health, Security and Environment;
- Complying with local laws and regulations, including tax payments;
- Respecting labor laws and Human Rights;
- Abiding by Disclosure/Reporting/Transparency rules and standards.

D- Beyond local content: creating local value

Local value creation would involve a paradigm shift on the part of IOCs, namely:

- Treating Congo not as a resource supplier (oil) only, but as a business partner with its own strategy and expectations;
- Redefining the currency of success: from “ring-fencing” of profits and profit maximization, to a “consolidated” long term return strategy;
- Better sharing information, knowledge, business values and best practices, successes and problems with state and NOC;
- Leveraging IOC business networks to assist Congo in its development strategies (e.g., in energy and Infrastructure);
- Creating value beyond the shareholders: the extended community includes also the host country where oil comes from;
- In a nutshell, moving from oil transactions to cooperation with Congo.

E- Bottom line: beating the competition by offering more than oil expertise

Increasing international competition for African oil on the one hand and the changing local demands from both governments and various stakeholders on the other are changing the business of oil contracting in Africa. The multifaceted relations between the former colonial powers and their former African colonies are weakening as a consequence of waning historical ties. Slow but irreversible transition towards democracy is changing the internal power dynamics in many African countries. China, India, Russia and Brazil are more than ever part of the scramble for African resources. The development urgency in Africa has created huge expectations in terms of what oil can achieve in oil-producing countries, thus putting the onus on both governments and IOCs to deliver locally on the social front. China, specifically, is proposing business packages including oil, infrastructure, loans and social projects. All this means that long-established vested oil interests in Africa will be more and more challenged.

Against that backdrop and to build sustainable and competitive oil businesses with Africa, the strategic response of the continent’s traditional oil partners should consist in creating more local value by offering **cash, capacity and cooperation**, as summarized in the Table below:

Forms of Local Value Creation by IOCs by Types of Local Stakeholders

	Cash	Capacity	Cooperation
Government	<ul style="list-style-type: none"> • Bonus • Royalty • Profit Oil • Taxes • Dividends 	<ul style="list-style-type: none"> • Oil Revenue Forecasting • Management of Oil Fund • Training of Public Executives in Oil 	<ul style="list-style-type: none"> • Sharing of Oil Data • Joint Oil Contracts Management • Integration of Oil/Energy Sectors • Contribution to Employment
National Oil Company	Share of oil Joint Venture	<ul style="list-style-type: none"> • Transfer of Technical and Managerial Skills • Training • Oil Accounting & Auditing • Oil Marketing • Strengthening of Internal Control 	<ul style="list-style-type: none"> • Joint Development of New Oil Fields • Trans-frontier Cooperation in E&P
Local Communities		<ul style="list-style-type: none"> • Local Physical and Social Infrastructure (roads, schools, hospitals...) • Scholarships 	Employment
Local Private Sector	Local Procurement	<ul style="list-style-type: none"> • Promotion of Local Entrepreneurship 	<ul style="list-style-type: none"> • Outsourcing • Local Joint ventures

CONCLUSION: A NEW BUSINESS MODEL FOR BOTH CONGO AND IOCs

As discussed, Congo PSCs pay little attention to local capacity building and the role of the NOC is not well specified in oil contracts. This is a big weakness in light of the exclusive role given to the NOC in dealing with IOCs. The PSCs further highlight the dichotomy between the expectations of the host countries and its real technical, negotiation and managerial capacity. As a result, it seems more urgent for the country to strengthen its national skills rather than focus on the fiscal terms of the oil contracts. Traditional IOCs are threatened by new competitors, including China which is changing the rules of the oil game in Africa. To survive and beat the increasing competition, they need to offer more than money in exchange of oil, for instance by adjusting their business strategies to the country's long term development needs. Consequently, both IOCs and the government need to innovate in oil contracting, essentially by shifting their focus from contract as a single transaction to contract as a partnership tool. The Table below summarizes the key dimensions of the transition from the existing business model to the new one, for both the government and the IOCs:

		Existing Business Model	Proposed Business Model
GOVERNMENT	Strategic Objective	<ul style="list-style-type: none"> •Maximize Government's Oil Take •Oil as a Commodity 	<ul style="list-style-type: none"> •Resource Management for Economic Development •Oil as a Development Tool
	Underlying Ideology	<ul style="list-style-type: none"> •Resource Nationalism •Conflict of Interest with IOCs •Government Victim of Power Imbalance 	<ul style="list-style-type: none"> •Cooperation with IOCs •Government Victim of Vision, Strategy and Skill Gaps
	Country/IOC Relationships	Transaction	Partnership
	Key Focus of Oil Contracts	Oil Production Sharing	<ul style="list-style-type: none"> •Capacity Building •Local Content •Local Value Creation •Oil Production Sharing
	Priority of Oil Contract Management	Contract Negotiation and Drafting	Contract Execution and Control
	IOC Selection Process	More or less Negotiated Deals	Open Bidding
	Guiding Principles in Oil Contract Negotiation	Fairness	<ul style="list-style-type: none"> •Fairness •Economic and Social Efficiency

IOC	Business Philosophy	<ul style="list-style-type: none"> •Oil only •Limited local value creation •Quick Return on Investment 	<ul style="list-style-type: none"> •Local Value Creation •Corporate citizenship
	Risk Hedging During Operations	Mainly Contractual and Legal: <ul style="list-style-type: none"> •Non-discrimination •Freedom to Transfer Profits and Assets •Minimization of Local Performance Clauses •Stabilization Clause •Conflict Resolution via International Arbitration 	<ul style="list-style-type: none"> •Alignment of IOC / Corporate Citizenship •Local Value Creation and Constituency Building •Corporate Social Responsibility •Long Term Development Partnership with Country
	Key Benefactor of Value Creation	Shareholders	<ul style="list-style-type: none"> •Extended Enterprise/Stakeholders •Host Country
	Currency of Transaction	Oil Money	Oil and Management Skills
	Product Portfolio	Oil Services	Oil Services + Skills and Knowledge Transfer
	Competitive Advantage of IOC	<ul style="list-style-type: none"> •Home/Host Country Relations •Political Connections 	Ability to Solve Country's Public Policy Challenges
	Performance Metrics	<ul style="list-style-type: none"> •Project-centric •Project Finance (R Factor, NPV, ROR/IRR...) 	<ul style="list-style-type: none"> •Project + Country Focus •Project Finance •Social Metrics (Training, Local Employment, Scholarships, Infrastructure, Schools, Hospitals...)
	Required Capabilities	Technicalities of Oil Exploration, Development, Production and Marketing	<ul style="list-style-type: none"> •Help build Integrated National Oil Industries •Comprehensive solutions to country's energy problems

APPENDIX: SUMMARY OF CONGO PSCs

	Mer TP Sud	Kouakou ala	Mer TP Nord	Emeraude	Kouilou	Madingo	Marine X	Marine VI, VII and Kitina	Haute Mer C	Haute Mer N'Kossa	PEX	PNGF
Date of Contract	May 16, 1997	1996	May 23, 1997	November 11, 1995	December 14, 1996	November 23, 1995	December 7, 1995	May 23, 1994	January 7, 2004	April 21, 1994	July 22, 1995	November 23, 1995
IOCs involved (Contracteur)	Elf	Zetah Group	Agip	Elf	Zetah Group	Agip Elf	Agip	Agip Chevron	Total	Elf	Elf Agip	Elf Agip
Lead IOC (Operateur)	Elf Congo	Zetah Group	Agip Congo	Elf Congo	Zetah Group	Agip Congo	Agip Congo	Agip Congo	Total	Elf Congo	Elf Congo	Elf Congo
Other Relevant legal and Contractual Sources	Establishment Convention of 1968 (+ Amendts)	MoU of August 30, 1995	Establishment Convention of 1968 (+ Amendts) ; March 1989 Agreement	Establishment Convention of 1968 (+ Amendts) ; June 1989 Agreement	MoU of August 30, 1995	Establishment Convention of 1968 (+ Amendts)	Establishment Convention of 1968 (+ Amendts)	Establishment Convention of 1968 (+ Amendts)	Establishment Convention of 1968 (+ Amendts) ; June 1989 Agreement	Establishment Convention of 1968 (+ Amendts) ; June 1989 Agreement	Establishment Convention of 1968 (+ Amendts) ; June 1989 Agreement	Establishment Convention of 1968 (+ Amendts) ; June 1989 Agreement
Modality of Contract Validation	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law	Law
Legal Ownership of Produced Oil (at wellhead)	Joint Property of Congo and Contractor	Joint Property of Congo and Contractor	Joint Property of Congo and Contractor	Joint Property of Congo and Contractor	Joint Property of Congo and Contractor	Joint Property of Congo and Contractor	Joint Property of Congo and Contractor	Joint Property of Congo and Contractor	Joint Property of Congo and Contractor	Joint Property of Congo and Contractor	Joint Property of Congo and Contractor	Joint Property of Congo and Contractor
Bonus	No	No	Yes, amount unspecified	Yes, amount unspecified	\$ 500,000	Yes, amount unspecified	Yes, amount unspecified	Yes, amount unspecified	No	No		No

	Mer TP Sud	Kouakouala	Mer TP Nord	Emeraude	Kouilou	Madingo	Marine X	Marine VI, VII and Kitina	Haute Mer C	Haute Mer N'Kossa	PEX	PNGF
Royalty Rate	15%	15%	15%	12%	15%	12%	15%	12%	15%	12%	12%	12%
Cost Oil Recovery Limit/ year (Cost Stop)	70% ; 85% if bbl < \$ 10; Indexation mechanism if bbl > \$ 22	60% up to 5 million barrels produced 50% beyond 5 million barrels	85% if bbl < \$ 10 70-85% if bbl between \$ 10 and \$ 14 70% if bbl > \$ 14	50% If bbl < \$10: cost stop of 70%; If bbl between \$ 10 and \$ 14, then cost stop of \$ 7/bbl; If bbl > \$ 22: cost stop is 50%	60%	50% If bbl between \$10 and \$ 14, then cost stop of \$ 7/bbl; If bbl > \$ 22: cost stop is 50%	50 % up to 200 meters; Negotiation if water depth > 200 meters; If bbl between \$ 10 and \$ 14, then cost stop of \$ 7/bbl; If bbl > \$ 22: cost stop is 50%	50 % up to 200 meters; Negotiation if water depth > 200 meters; If bbl < \$10: cost stop of 70%; If bbl between \$ 10 and \$ 14, then cost stop of \$ 7/bbl; If bbl > \$ 22: cost recovery limit = barrels produces x \$ 22 (adjusted)	60% If bbl < \$10: cost stop of 84%; If bbl between \$ 10 and \$ 14, then cost stop of \$ 8.4/bbl; If bbl > \$ 22: cost recovery limit = barrels produces x \$ 22 x 60%	50% If bbl < \$10: cost stop of 70%; If bbl between \$ 10 and \$ 14, then cost stop of \$ 7/bbl; If bbl > \$ 22: cost stop = \$ 22 x Net Producti on in bbls	50% If bbl < \$10: cost stop of 70%; If bbl between \$ 10 and \$ 14, then cost stop of \$ 7/bbl; If bbl > \$ 22: cost recovery limit = barrels produces x \$ 22 x 50%	50% If bbl < \$10: cost stop of 70%; If bbl between \$ 10 and \$ 14, then cost stop of \$ 7/bbl; If bbl > \$ 22: cost recovery limit = barrels produces x \$ 22 x 50%
Oil Cost CarryForward (Above Recovery Limit)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	Mer TP Sud	Kouakouala	Mer TP Nord	Emeraude	Kouilou	Madingo	Marine X	Marine VI, VII and Kitina	Haute Mer C	Haute Mer N'Kossa	PEX	PNGF
NOC's Participation in Project	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Unspecified	Yes (35%)	Unspec.	Unspec.	Unspec.	Unspec.
Business Income Tax Rate	25%	Re/ Hydrocarb. Code	30%	50%	Re/ Hydrocarb. Code	50%	50%	50%	Yes, but unspec.	50%	35%	50%
Special petroleum Tax (PID)	1% Net Production	1% Net Production	1% Net Production	1% Net Production	1% Net Production	1% Net Production	1% Net Production	1% Net Production	1% Net Prod.	1% Net Prod.	1% Net Prod.	1% Net Prod.
Ring-fencing of Cost Recovery (Cost recovery per individual permit)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Law of Contract	Congo	Congo	Congo	Congo	Congo	Congo	Congo	Congo	Congo	Congo	Congo	Congo
Dispute Resolution	ICSID Arbitration	ICSID Arbitration	ICSID Arbitration	ICSID Arbitration	ICSID Arbitration	ICSID Arbitration	ICSID Arbitration	ICSID Arbitration	ICSID Arbitr.	ICSID Arbitr.	ICSID Arbitr.	ICSID Arbitr.

	Mer TP Sud	Kouakouala	Mer TP Nord	Emeraude	Kouilou	Madingo	Marine X	Marine VI, VII and Kitina	Haute Mer C	Haute Mer N’Kossa	PEX	PNGF
Contract Duration	Permit Validity	Permit Validity	Permit Validity	Permit Validity	Permit Validity	Permit Validity	Permit Validity	Permit Validity	Permit Validity	Permit Validity	Permit Validity	Permit Validity
Transfer of Oil Production Facilities to the Government at end-contract	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	yes
Transfer of Oil Equity subject to Government’s Approval	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

REFERENCES

ON LINE SOURCES

1. Oil, Gas & Energy Law Intelligence, OGEL : www.gasandoil.com/ogel
2. Oil & Gas Journal Online: <http://www.ogj.com>
3. Oxford Institute of Energy Studies: www.oxfordenergy.org
4. The Journal of Energy and Natural Resources Law: www.ibashop.e-mango.co.uk
5. The Institute of Petroleum Accounting: <http://www.ipa.unt.edu/> (and the Petroleum Accounting and Financial Management Journal);

BOOKS ON OIL AND NATURAL RESOURCES

1. Center for Economics and Management (IFP-School): "Oil and Gas Exploration and Production", Editions Technip, Paris, 2007
2. Tengku Nathan Machmud: "The Indonesian Production Sharing Contract: An Investor's Perspective", 2000, Kluwer Law International
3. Daniel Johnston: "Petroleum Fiscal Systems and Production Sharing Contracts", 1994, PennWell Corporation
4. Daniel Johnston: "International Exploration Economics, Risks, and Contract Analysis", 2003, PennWell Corporation
5. James Bush and Daniel Johnston: "International Oil Company Financial Management in Nontechnical Language", 1998, PennWell Corporation
6. David Johnston and Daniel Johnston: "Oil Company Financial Analysis", 2006, PennWell Corporation
7. John S. Lowe: "Oil and Gas Law", 2003, Thomson West
8. Martin S. Raymond and William L. Leffler: "Oil and Gas Production in Nontechnical Language", 2006, PennWell Corporation
9. African Development Bank and the African Union: "Oil and Gas in Africa", 2009, Oxford University Press
10. Roland A. Jansen: "Profits from Natural Resources: How to Make Big Money Investing in Metals, Food and Energy", 1999, John Wiley & Sons, Inc.
11. Juan P. Camus: "Mineral Resources: Creating Value in the Mining Business", 2002, Society for Mining, Metallurgy and Exploration Inc.
12. MMSD: "Breaking New Ground", 2002, Earthscan Publications Ltd
13. United Nations: "Administration of Fiscal Regimes for Petroleum Exploration and Development", 1995, United Nations
14. Silvana Tordo : " Fiscal Systems for Hydrocarbons: Design Issues", 2007, The World Bank
15. Kathryn McPhail and Aidan Davy: "Integrating Social Concerns into Private Sector Decisionmaking: A Review of Corporate Practices in the Mining, Oil and Gas Sectors", 1998, The World Bank

16. Thomas F. Torries: "Evaluating Mineral Projects: Applications and Misconceptions", 1998 Society for Mining, Metallurgy and Exploration Inc
17. "Hemmingway Oil and gas Law and Taxation", 2004, Fourth Edition, Thomson West
18. "Dictionary of Mining, Mineral and Related terms", 1997, Second Edition
19. "Cases and Materials on Oil and Gas Law", Fifth Edition, 2998, Thomson West
20. "Fundamentals of Oil & Gas Accounting", Fourth Edition, 2001, PennWell Corporation
21. Global Witness: "Time for Transparency: Coming Clean on Oil, Mining and Gas Revenues", 2004, A Report By Global Witness
22. Peter Rosenblum & Susan maples : " Contracts Confidential: Ending Secret Deals in the Extractive Industries", 2009, Revenue Watch Institute
23. Nicholas Shaxson: "Poisoned Wells: The Dirty Politics of African Oil", 2008, Palgrave Macmillan
24. J.M.Davis, R. Ossowski and A. Fedelino: "Fiscal Policy Formulation and Implementation in Oil-Producing Countries", 2003, International Monetary Fund
25. Soala Ariweriokuma: "The Political Economy of Oil and Gas in Africa: The Case of Nigeria", 2009, Routledge
26. Malgosi Fitzmaurice and Milena Szuniewicz: "Exploitation of natural Resources in the 21st Century", 2003, Kluwer Law International
27. Ricardo Soares de Oliveira: "Oil and Politics in the Gulf of Guinea" , 2007, Columbia University Press
28. Menachem Katz, Ulkrich Bartsch, Harunder Malothra and Milan Cuc: "Lifting the Oil Curse", 2004, International Monetary Fund
29. Daniel Lederman and William F. Maloney: "Natural Resources: Neither Curse Nor Destiny", 2007, The World Bank
30. "Nigeria Oil and Gas Exploration Laws and Regulations Handbook", 2010, International Business Publications
31. "Mala ysia Oil and Gas Exploration Laws and Regulations Handbook", 2010, International Business Publications

BOOKS ON CONTRACTS AND LAW

1. Marcel Fontaine and Filip De Ly: "Drafting International Contracts: An Analysis of Contract Clauses", 2006, Transnational Publishers, Inc.
2. Nico Schrijver: "Sovereignty Over Natural Resources: Balancing Rights and Duties", 1997, Cambridge University Press
3. Victor Goldberg: "Readings in the Economics of Contract Law", 1989, Cambridge University Press
4. M. Sornarajah: "The International Law on Foreign Investment", 2004, Cambridge University Press
5. P.T. Muchlinski: "Multinational Enterprises and the Law", 1999, Blackwell Publishing

6. G. Gregory Letterman: "Unidroit's Rules in Practice: Standard International Contracts and Applicable Rules", 2001, Kluwer Law International
7. Jay G. Martin and Mark S. Anshan: "Alternative Dispute Resolution for Oil and Gas Practitioners", 2001, American Bar Association
8. "State Contracts", 2004, UNCTAD Series, United Nations

BOOKS ON PUBLIC POLICY

1. David L. Weimer and Aidan R. Vining: "Policy Analysis: Concepts and Practice", Second Edition, 1992, Prentice Hall
2. Eugene Bardach: "A Practical Guide for Policy Analysis", 2000, Chatham House Publishers

BOOKS ON INTERNATIONAL MANAGEMENT (STRATEGY, INTERNATIONAL MARKETS, NEGOTIATION, PROJECT FINANCE AND POLITICAL RISK)

1. Charles R. Kennedy: "Managing the International Business Environment: cases in Political and Country Risk", 1991, Prentice Hall International edition
2. Franklin R. Root: "Entry Strategies for International Markets", 1994, Lexington Books
3. Michel Makinsky: "Les Risques Politiques Internationaux", 1988, Editions SA
4. "Strategy", 2005, Harvard Business Press
5. Theodore H. Moran and Gerald T. West: "International Political Risk Management", 2005, The World bank Group
6. Scott L. Hoffman: "The Law and Business of International Project Finance", Third Edition, 2008, Cambridge University Press
7. Jeswald W. Salacuse: "The Global Negotiator", 2003, Palgrave Macmillan
8. "Power, Influence and Persuasion", Harvard Business Essentials, HBS Press
9. Charles B. Craver: "Effective Legal Negotiation and Settlement", 2005, LexisNexis
10. Roger Fisher and William Ury: "Getting to Yes: Negotiating Agreement Without Giving In", 1991, Penguin Books
11. Roger Fisher and Daniel Shapiro: "Beyond Reason: Using Emotions as You Negotiate", 2005, Penguin Books
12. Gregory A. Garrett: "Contract Negotiations: Skills, Tools, and Best Practices", 2005, CCH Incorporated
13. Claude Cellich and Subbash Jain: "Global Business Negotiations: A Practical Guide", 2004, Thomson-Soutwest
14. Ralph H. Folsom, Michael Wallace Gordon and John A. Spanogle: "International Business Transactions", 2004, Thomson West
15. "Managing Projects Large or Small", 2004, Harvard Business Essentials, HBS Press
16. Peter K. Nevitt: "Project Financing", Fifth Edition, 1989, Euromoney
17. Hossein Razavi: "Financing Energy Projects in Developing Countries", 2007, PennWell Corporation

18. "Negotiation", Harvard Business Essentials, 2003, HBS Press
19. Pankaj Ghemawat: "Redefining Global Strategy", Harvard Business School Press, 2007

ARTICLES IN SPECIAL JOURNALS

1. Paul Stevens: "National Oil Companies and International Oil Companies in the Middle East: Under the Shadow of Government and the Resource Nationalism Cycle", Journal of World Energy Law & Business, Volume 1, Number 1, May 2008
2. Daniel Johnston: "Changing Fiscal Landscape", Journal of World Energy Law & Business, Volume 1, Number 1, May 2008
3. Thomas W. Walde: "Renegotiating Acquired Rights in the Oil and Gas Industries: Industry and Political Cycles Meet the Rule of Law", Journal of World Energy Law & Business, Volume 1, Number 1, May 2008
4. Piero Bernardini: "Stabilization and Adaptation in Oil and Gas Investments", Journal of World Energy Law & Business, Volume 1, Number 1, May 2008
5. A.F.M. Maniruzzaman: "The Pursuit of Stability in International Energy Investment Contracts: A Critical Appraisal of the Emerging Trends", Journal of World Energy Law & Business, Volume 1, Number 2, July, 2008
6. Lorenzo Cotula: "Reconciling Regulatory Stability and Evolution of Environmental Standards in Investment Contracts: Towards a Rethink of Stabilization Clauses", Journal of World Energy Law & Business, Volume 1, Number 2, July, 2008
7. Bayo Adaralegbe: "Stabilizing Fiscal Regimes in Long Term Contracts: Recent Development From Nigeria", Journal of World Energy Law & Business, Volume 1, Number 3, November, 2008
8. George Joffé, Paul Stevens, Tony George, Jonathan Lux and Carol Searle: "Expropriation of Oil and Gas Investments: Historical, Legal and Economic Perspectives in a New Age of Resource Nationalism", Journal of World Energy Law & Business, Volume 1, Number 1, March, 2009
9. C.R.K. Moore: "Perspectives on the Valuation of Upstream Oil and Gas Interests: An Overview", Journal of World Energy Law & Business, Volume 1, Number 1, March, 2009
10. Jędrzej George Frynas: "Corporate Social Responsibility in the Oil and Gas Sector", Journal of World Energy Law & Business, Volume 1, Number 31, November, 2009
11. M.A. Polkinghorne and C. Kirkman: "Pre-Contractual Agreements: How to Keep Out of the Woods", Oil, Gas and Energy Law Intelligence, Vol.7, Issue 4, December 2009
12. King & Spalding LLP: "An Introduction to Upstream Government Petroleum Contracts: Their Evolution and Current Use", Oil, Gas and Energy Law Intelligence, Vol. 3, Issue 1, March 2005
13. E.E. Smith and J.S. Dzienkowski: "A Fifty Year Prospective on World Petroleum Arrangements", Oil, Gas and Energy Law Intelligence, Vol. 3, Issue 1, March 2005

14. M. Bunter: "Indonesia: From Concession to Contract", Oil, Gas and Energy Law Intelligence, Vol. 3, Issue 1, March 2005
15. M.B. Umar: "Legal Issues in the Management of Nigeria's Production Sharing Contracts From a Study of the Nigerian National Petroleum Corporation's Perspective", Oil, Gas and Energy Law Intelligence, Vol. 3, Issue 1, March 2005
16. N. Pongsiri: "Partnerships in Oil and Gas Production-Sharing Contracts", Oil, Gas and Energy Law Intelligence, Vol. 3, Issue 1, March 2005
17. B.O.N. Nwete: "To What Extent Can Stabilization Clauses Mitigate the Investor's Risks in a Production Sharing Contract?", Oil, Gas and Energy Law Intelligence, Vol. 3, Issue 1, March 2005
18. A.F.M. Maniruzzaman: "Understanding Stabilization Techniques in Production Sharing Agreements: Some Remarks", Oil, Gas and Energy Law Intelligence, Vol. 3, Issue 1, March 2005
19. S.W. Stein: "Non-Fiscal Elements in Production Sharing Agreements in Developing Countries", Oil, Gas and Energy Law Intelligence, Vol. 3, Issue 1, March 2005
20. L. Bossley: "Production Sharing Contracts: "What is Market Price?", Oil, Gas and Energy Law Intelligence, Vol. 3, Issue 1, March 2005
21. "An Introductory Guide to the New SPDC Model Contracts", Shell Petroleum Development Company of Nigeria, 2000
22. Abba Kolo and Thomas Walde: "Renegotiation and Contract Adaptation in the International Investment Projects: Applicable Legal Principles and Industry Practices", Oil, Gas and Energy Law Intelligence, Vol. 1, Issue 2, March 2003
23. Kirsten Bindemann: "Production Sharing Agreements: An Economic Analysis", Oxford Institute of Energy Studies, 1999
24. Peter D Cameron: "Contract Stability in the Petroleum Industry: Changing the Rules and The Consequences", Middle East economic Survey, Vol. XLIX, No.22, May 2007
25. J.Jay Park: "Oil Contracts in Sudan: Developing and Implementing a Plan for the Future", Macleod Dixon LLP, 2006
26. Daniel Johnston: "Current developments in Production Sharing Contracts and International petroleum Concerns", Petroleum Accounting and Financial Management Journal, 1999
27. Nicolas Bonnefoy: "Petroleum legal Regimes in the Gulf of Guinea", International Oil and gas Finance Review, 2006
28. A.Z. El Chati: "Protection of Investment in the Context of Petroleum Agreements", Collected Courses of the Hague Academy of International Law, 1987
29. Achille Toto Same: "Windfall Management for Poverty Reduction: Improving Public Finance management, the Case of Chad", The World Bank Policy Research Working Paper 4596, 2008
30. Oliver E. Williamson: "The Economics of Governance", AEA Papers and Procedures, May 2005, Vol 95. No.2

31. Paul Collier: "Laws and Codes for the Resource Curse", Yale Human Rights & Development, Vol.11, 2008
32. Charles R. Blitzer, Panos E. Cavoulacos and Donald R. Lessard: "Contract Efficiency and Natural Resource Investment in Developing Countries, Columbia Journal of World Business, Spring 1984
33. Charles R. Blitzer, Donald R. Lessard, James L. Paddock: "Risk-Bearing and the Choice of Contract Forms for Oil Exploration and Development", The Energy Journal, Vol.5, No.1, 1984