# New business models for the international oil company

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**Petronationalism, the growing expense and risk of finding and producing oil and the coupling between increasingly capable national oil companies and aggressive oilfield services providers have all put pressure on international oil companies in recent years. The article provides a historical perspective on petronationalism, assesses these threats and shows how both international oil companies and independent producers can rethink their business models to enable them to thrive in a changing oil world.**

The global energy industry has been facing a variety of challenges in recent years: extreme price volatility, decline of "easy oil", commoditization of technologies, shortage of talent, pressure to reduce the carbon footprint, emergence of global national oil companies (NOCs, such as China's CNOC) and surge in petronationalism. These last two challenges have put the current business model of the international oil companies (IOCs) in question, possibly as dramatically as did the shift that occurred in the late 1960s and early 1970s, when Petroleum International Agreements (PIAs) shifted from the concession model to the current production sharing agreements (PSAs).

Petronationalism has been around almost from the day the industry was born – the first significant nationalisation happened in Mexico in 1938 – but it has regained major significance lately because IOCs, such as ExxonMobil and Chevron, which traditionally were the only significant players in the international arena, are now being squeezed by different types of competitors: on the one hand, large state-owned NOCs that are expanding their influence beyond their national borders, and on the other, hungry and assertive oilfield services providers.

Traditionally IOCs have managed to cope quite effectively with another known threat, namely that posed by the independent oil companies such as Apache and Tullow. Unlike the independents, for example, they have been able to leverage their deeper pockets to replace reserves through low-risk acquisitions instead of high-risk exploration activities. However, the coupling that is occurring now between increasingly capable NOCs and assertive oilfield services providers is a much more vital threat to the IOCs. It is compounded by the growing expense and risk of exploring and developing oilfields, for example, in hostile environments such as the Artic or in ultra-deep water, which puts the financial position of the oil companies under pressure.

In this article, we will first provide a historical perspective on petronationalism. Then we will assess the threats emanating from the coupling between NOCs and service providers. Finally, we will indicate how IOCs and independents should rethink their business models so that they can continue to thrive in the next generation of oil markets.

## A historical perspective on petronationalism

Petronationalism started some decades ago. In the 1960s, 85 % of global oil and gas reserves were fully open to IOCs for equity participation, 14 % were held by the Soviet Union and the NOCs controlled about 1 %. This situation has changed dramatically. Reserves to which IOCs have full access were reduced to a mere 6 % by 2007 (see Table 1). ExxonMobil, the largest IOC, now ranks only 21st as far as reserves are concerned. Likewise, in 2007 50 countries accounted for 78 % of total world oil production and 70 % of that oil was produced by NOCs.

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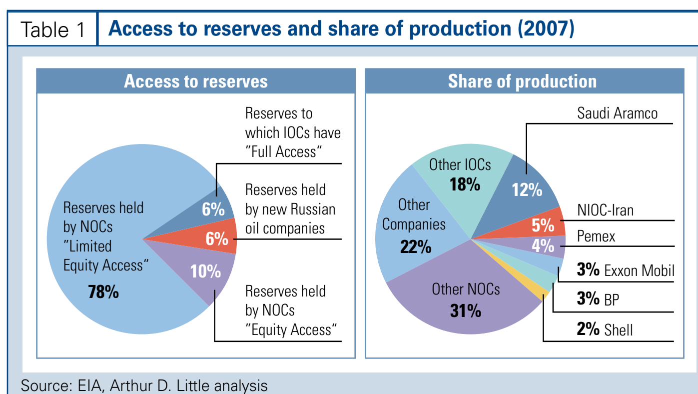
Table 1 **Access to reserves and share of production (2007)**




Source: EIA, Arthur D. Little analysis

After the initial surge of nationalisations between the 1950s and the early 1970s, the rate subsided in the 1980s and 1990s. But the recent renewed surge is again challenging the long-term business continuity of the major IOCs. It limits their access to new reserves and lowers their equity stakes in current production in mature assets. A clear example of this trend is the recent round of agreements on Iraqi oil: top IOCs and a few global NCOs had to compete for service agreements (as opposed to PSAs) with extremely low margins per barrel, albeit for huge oilfields.

The dramatic decrease in access to reserves has impaired IOCs' ability to replace them as most NOCs and host governments are refusing to provide equity positions to IOCs. As a result, IOCs are moving away from their traditional role as full equity developers toward various types of commercial arrangements including partial equity sharing and fee-for-services.

NOCs, on the other hand, have seen their power and wealth grow. They started asserting themselves in the world energy markets, expanding their upstream as well as downstream footprints. Certain NOCs have been busily transforming themselves from domestic, sovereign companies into global players, thereby competing directly for resources outside their borders and for the international market. They are doing so through equity positions outside their national borders – launching a round of acquisitions from 2004 onward – and through alliances and joint ventures with IOCs.

## The coupling between NOCs and oilfield services providers

As NOCs have grown in weight and reach, the oilfield services providers have grown in skill and influence. Increasingly capable NOCs and assertive oilfield services providers are coupling in ways that represent a growing threat to the IOCs' position:

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- NOCs have learned to manage conventional oil assets with a remarkable level of efficiency. For example, existing field revamps often require technologies now available to all players, IOCs and NOCs alike. The infilling program of the vast Saudi Aramco Khurais field (delivered 10 months ahead of schedule) is a clear example of excellent technology deployment performed by an NOC.

- As far as the development phase is concerned, IOCs have turned mostly into prime contractors, losing their technological lead to service providers and engineering, procurement and construction (EPC) contractors, such as Aker, Baker Hughes and Saipem.

*To address this threat and thrive in the next generation of oil markets, IOCs – and independents, for that matter – will have to redesign their strategies. At the same time, they will have to live with diminishing financial returns due to the growing technical challenges and increased competition, even when acquiring contracts.*

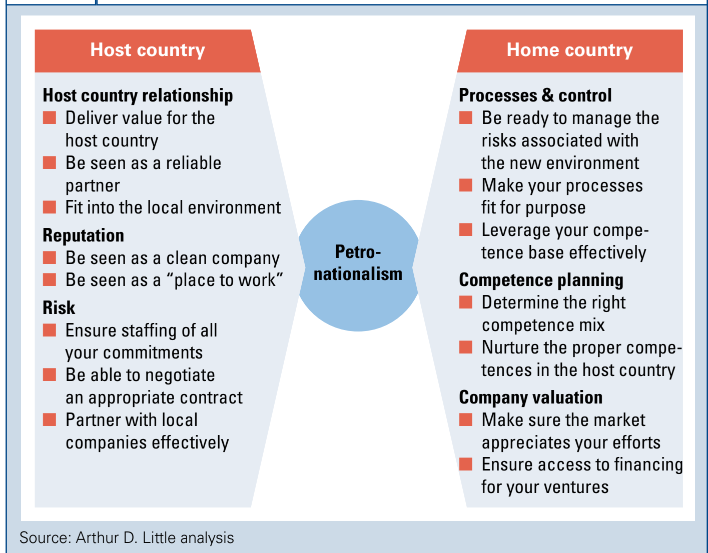
- Talent is short across the industry and IOCs have also lost part of their technical edge. Oilfield technical services providers such as Schlumberger own most of the new technologies and sell them to both IOCs and NOCs.
- Oilfield services providers have learned to extend their service span and increase their profitability. At the same time, they have leaner processes and structures that help them keep costs down, allowing for lower hurdle rates for investments.
- National authorities have improved their capability in leveraging effective service contracts, pushing IOCs towards buyback schemes and technical service provider fees.

**Strategies to address the challenge**

To address this threat and thrive in the next generation of oil markets, IOCs – and independents, for that matter – will have to redesign their strategies. At the same time, they will have to live with diminishing financial returns due to the growing technical challenges and increased competition, even when acquiring contracts. The required changes cannot be incremental. They will have to be as drastic as those that accompanied the shift from a downstream to an upstream focus in the second half of the nineteenth century and the shift from the concession model to PSAs in the 1960s and 1970s.

These strategies, for IOCs and independents alike, fall into two categories (see Table 2). The first category focuses on the host country in which the oil company operates. In a previous Prism article (first semester 2006), we addressed this category in depth and therefore here we are providing only a summary and two examples (see insert). In the remainder of this article, we will address the second category of strategies: those that focus on the oil company's home country, i.e. its corporate management and investors.

Table 2 **Strategies for oil companies facing petronationalism**




Source: Arthur D. Little analysis

## Ten host country strategies for IOCs

1. Invest wisely in local development, providing training as well as technical and financial support to local vendors and contractors.

2. Support NOCs in their social objectives to maximize the impact that community investment can have through a closer alignment with the host government's social goals.

3. Reinvent the expatriate model, making room for seasoned locals in top positions and providing them with international experience.

4. Be open to the needs of the host country's stakeholders, but without compromising transparency on the resources to be committed for this purpose. Public image will be strengthened.

5. Learn local history to identify solutions that are acceptable both to government and to the population at large.

6. Develop a friendly image towards local citizens and communities.

7. Pay greater attention to risks above the ground, i.e. the political and macroeconomic risks associated with an investment, especially when you lack an established presence in the target country.

8. Refine negotiating skills to deal effectively with delicate negotiation issues, adapt to often-changing interlocutors and respond to potentially disruptive situations.

9. Find the right partner, e.g. a local player. It can make a difference to the quality of relations with authorities.

10. Focus your attention on the key decision-makers, e.g. on their educational, professional and political background, to identify additional selling points or avoid potential roadblocks.

Eni Group's campaign in Africa is a good example of a successful host country strategy. The company has become the leading player in Africa (see Table 3) thanks to its negotiating skills based on a side-by-side approach with local governments.

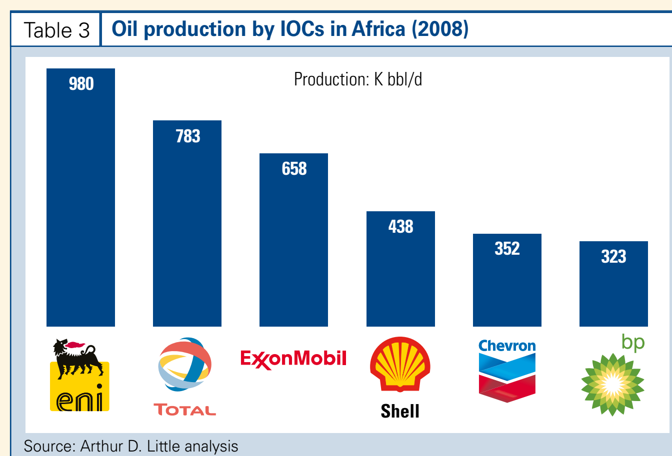



Table 3 **Oil production by IOCs in Africa (2008)**

Source: Arthur D. Little analysis

From Nigeria to Congo, Eni sustains large social projects. Within its core business, it carries out initiatives that other majors do not pursue, such as the utilization of gas to produce electricity instead of flaring it. Eni's success shows that a friendly image in the host country, a focus on political and macroeconomic risks, the leverage of the right local partners and a strong focus on key decision-makers can yield excellent results. Likewise CNOC – which is developing infrastructure, roads and power plants – is increasing its presence in Africa significantly.

Another example comes from Venezuela, where Chevron and ExxonMobil are pursuing very different strategies. Chevron chose a strategy of "diplomatic accommodation." It uses astute diplomatic tactics to avoid confrontation with the nationalistic government. It has agreed to new contractual terms with significant profit reductions and loss of management control to PDVSA, Venezuela's NOC, but it continues to pursue growth opportunities in the country, with a focus on heavy oil and offshore gas. Recently, it secured a new block in the Orinoco Belt bidding round.

ExxonMobil, on the other hand, opted for a strategy that can be described as "cut your losses and walk away." It has withdrawn fully from Venezuela with potential near-term losses. The advantage is that it avoids setting precedents about willingness to negotiate with an antagonistic government. It has disputed the legality of contract changes and is currently pursuing arbitration claims for Orinoco assets.

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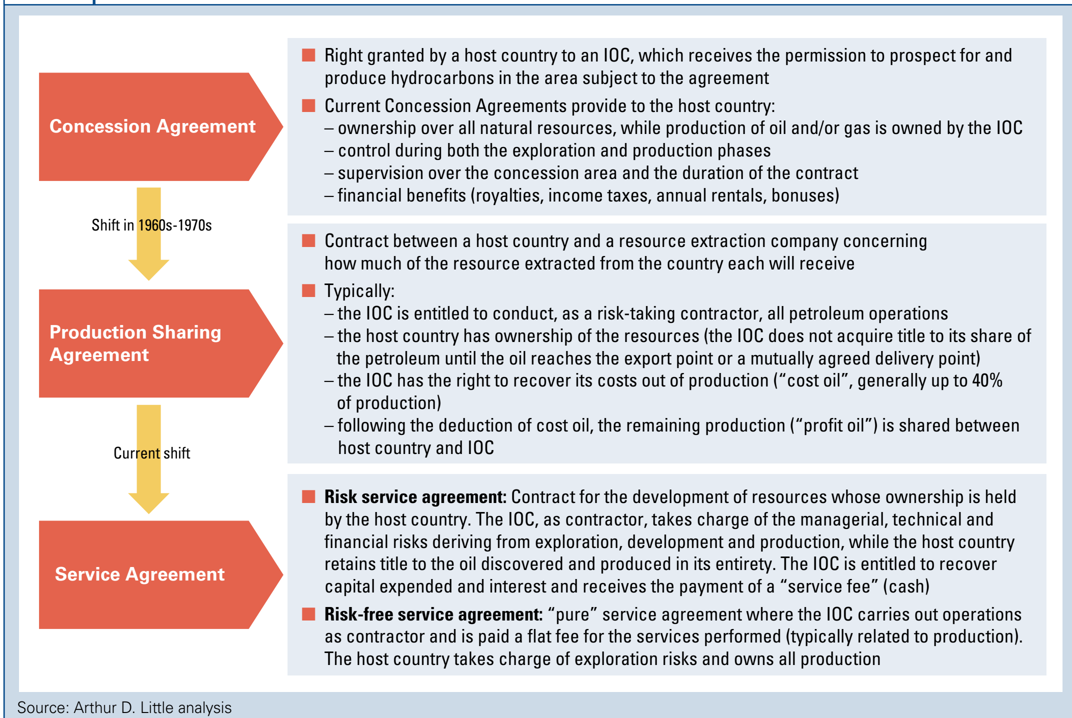
## A new business model for IOCs and independents

The growing coupling between NOCs and oilfield services companies won't, of course, make IOCs and independents redundant. NOCs and host countries will continue to rely on IOCs for their exploration, development and production needs. However, they will make use of new contract for-

Table 4 **The evolution of Petroleum International Agreements (PIAs)**




Source: Arthur D. Little analysis

mulas, shifting from PSAs to service agreements (see Table 4). This shift is forcing IOCs and independents to rethink their business model.

As they rethink their business model, IOCs and independents will have to address three sets of issues:

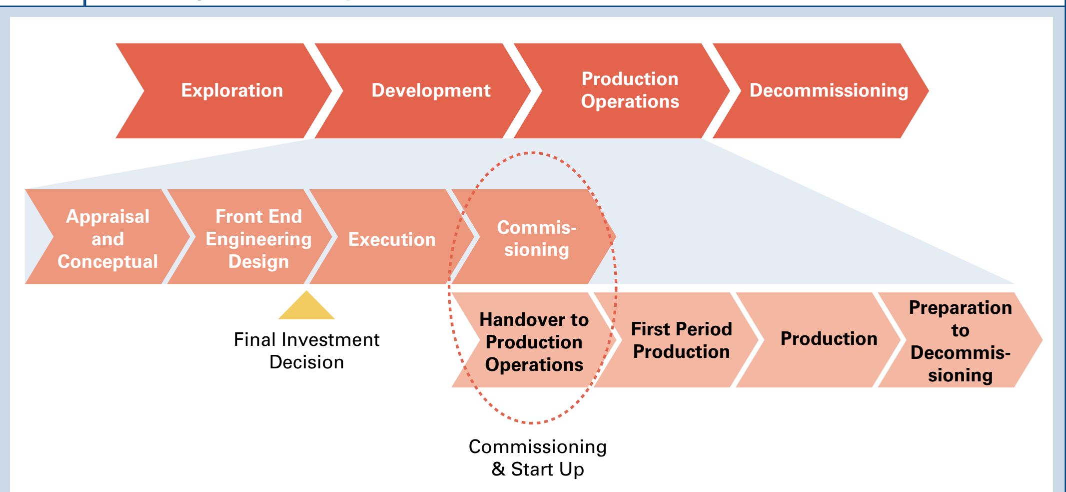
1. Processes and control: how to reduce the industrial risks of ventures given the new contract formulas
2. Competence planning: how to secure the right mix of competences required to work in the new contractual environment
3. Company valuation: how to ensure proper valuation of the company despite the new contract formulas.

**1. Processes and control**

Industrial risk management is a major concern in this new contractual environment. During the bidding phase with the host country, IOCs commit themselves to challenging targets, while they have limited knowledge of the real technical challenges ahead and little time to study and evaluate the related costs of possible solutions. One typical example are the service agreements with Iran, where the buyback scheme is used, under which the IOC establishes a contract with the host country to develop a new asset according to a turnkey formula, and at the end of the development the asset is handed over to the host country. Another example are the service agreements with Iraq, where the development and production service scheme is used, with very low fixed fees per barrel.

These examples demonstrate that the main industrial risks occur in the first phases of the asset lifecycle (see Table 5). Ideally IOCs would like to hold off from bidding and making a contract until after the front-end engineering design is done and they are ready for the so-called Final Investment Decision (FID). In practice, of course, the bidding occurs earlier. In order to bid properly, the IOCs have to anticipate the FID by the end of the conceptual phase. As a consequence, they should reinforce their cost-estimating capabil-

Table 5 **Risks along the asset lifecycle**




Source: Arthur D. Little analysis

ities significantly, standardize their designs and put in place rigorous project control processes and tools. IOCs could improve their performance in these domains, where some players are already top-class whilst others lag seriously behind, by learning from the main EPC contractors.

*IOCs and independents should also secure the right mix of competences required to work in the new contractual environment. IOCs have to regain their lost position of undisputed technological superiority.*

Another major risk occurs at commissioning and handover, especially with buyback schemes. The different operational doctrines of the developer and the operator could lead to non-acceptance and delays in the final handover of the asset. The key to success is a far-reaching reinforcement of operations readiness and assurance (OR&A) culture and practices in order to secure seamless integration between developers and operators.

In the case of technical service-providing schemes within the service agreement contractual framework, competence management is the key to success. First, IOCs should become more effective so that they can compete with leaner and cheaper EPC contractors invading the service-providing arena. Second, they should secure the proper availability of skilled local resources.

**2. Competence planning**

IOCs and independents should also secure the right mix of competences required to work in the new contractual environment. They should be ready to deal with initiatives where they have limited control of the reservoir. Thus they have to reinforce some competence areas in production, mostly linked to well engineering and production optimization. Service agreements typically imply an increased reliance on local resources, which should require clear boundaries and obligations for the host country – agreed upon at contract signature – in terms of training and the availability of skilled resources. Structured and realistic national resource plans are of paramount importance.

At the same time, IOCs have to regain their lost position of undisputed technological superiority. They can attain technology leadership through more intense internal development efforts – either through proprietary technology development or through a fast-follower strategy leveraging academia or by acquisitions.

### 3. Company valuation

The traditional key drivers for the evaluation of oil companies are proven reserves, reserves replacement cost and daily production. Unfortunately, when an IOC establishes an otherwise attractive service agreement, none of these parameters is affected. As a consequence, service agreements hamper IOCs' capability to improve their market value and increase their financial leverage. They are forced into a tight corner, where they have to act as a "bank" for some of the service agreements themselves (as in Iraq) and bear the increasing financial risks and burden of exploring and developing in extreme conditions (such as deep water and hostile environments).

In order to ensure proper valuation of the company in a new contractual environment, IOCs may have to make a clear-cut separation of their traditional PSA-based and service agreement-based businesses. Such separation would be beneficial in many respects:

*In order to ensure proper valuation of the company in a new contractual environment, IOCs may have to make a clear-cut separation of their traditional PSA-based and service agreement-based businesses.*

- The separate company or division can be valued and leveraged on the basis of new parameters such as risk exposure and financial earnings – which can be huge even in this new competitive environment.
- The company can define specific fit-for-purpose lifecycle management rules to support the different business requirements and related decision-making processes.
- The company can refocus its competence planning and development actions to serve the new business requirements.
- The company can create fit-for-purpose compensation policies to support the new resource base.
- The separation accelerates the cultural fit related to the OR&A required to service external customers.
- The separation leads to a new culture that helps to integrate a growing number of local resources.

## Insights for the executive

Petronationalism is evident in the growing power and wealth of NOCs. At the same time, the oilfield services providers have grown in skill and influence. The coupling between the increasingly capable NOCs and assertive oilfield services providers represents a growing threat to the IOCs' position.

Until now, however, IOCs have apparently not been able to rethink their business models fundamentally and thus address the challenges pushed onto them by the shift occurring in their industry. We expect their future returns on investments to decrease while oil business risks increase considerably.

This shift, nonetheless, represents an unparalleled opportunity for all players in the industry:

- The increasingly strong NOCs can partner more effectively with reserve- and production-hungry IOCs and independents to increase their production effectiveness (i.e. recovery factor) and efficiency (i.e. cost oil). This will help them extend their positions outside their national borders.

- Independents can leverage their higher risk predisposition and their less-threatening appearance towards host countries to enter the arena of big oil successfully. Nonetheless, they should learn how to improve their overall value to the local communities and pay more attention to their workforce.

- Service providers can move out of their traditional EPC contractor position in the value chain and join the arena of producers, thus making their financial positions more stable.

IOCs can also continue to thrive, provided they address a few key issues head-on:

- Rethink the business model, including the organizational model, competences and attitudes such as risk aversion.

- Redefine the interface and integration with host countries, becoming agents of economic and social development working together with the host governments.
- Rekindle the technology strategy, in order to regain leadership and create truly differentiated results compared with those achievable by the coupling between NOCs and service providers.

*For a full listing of sources used in this article, please consult the online version on our website.*

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