Introduction

In most important oil-producing regions of the world, the oil industry has been nationalized. Ninety percent of the world's oil reserves are entrusted to state-owned companies. The five national oil companies (NOCs) that are the focus of this book together produce one quarter of the world's oil and hold one half of the world's oil and gas reserves. What do we know about these oil titans? Do we understand how they operate and what drives them? Do they emphasize politics over profits? Do they have the technical and business skills to develop responsibly the immense petroleum resources entrusted to them?

In spite of the dependence of importing countries' economic fortunes on the performance of the NOCs of the Middle East and North Africa, outsiders know very little about these organizations. Their opacity has discouraged most analysis so far. However, after explaining my project, I was invited to meet with the managers of Saudi Aramco, the Kuwait Petroleum Corporation (KPC), the National Iranian Oil Company (NIOC), Sonatrach (Algeria) and the Abu Dhabi National Oil Company (ADNOC). They allowed extensive interviews to be conducted, demonstrating their interest in discussing both their past accomplishments and future challenges. These were fascinating discussions, and this book will tell those companies' stories.

From the oil industry's perspective, it is an important time to be studying NOCs. Many of them are emerging on the international scene, no longer confined to filling the shoes of the oil majors, which left when the host countries nationalized their oil sector. NOCs have grand ambitions: they are competing with the majors on their turf by developing new oil reserves overseas and investing in international refining and retail activities. National oil companies from China, India and Malaysia are in the spotlight, signing deals in Saudi Arabia, Iran and Sudan, for instance. Some NOCs are being partially privatized, to encourage their competitiveness, while other countries are reasserting national control over their oil sector. In a move that startled the industry in the summer of 2005, the China National Offshore Oil Corporation (CNOOC), a Chinese state oil company listed on the New York Stock Exchange, bid to buy out a Western international oil company, Unocal—this bid presaged growing ambitions on the part of the new players. Meanwhile, Russia, which is seen as the new frontier for the private international oil companies, appears to be reasserting the role of the state in the oil and gas sector by dismantling the most successful private Russian company, Yukos, and discouraging new foreign investment. The industry is in flux.

Two years ago, when I began this research on national oil companies and to discuss them with peers, I received mostly negative comments about their inefficiency. But now, the tone has changed. People are starting to take notice of NOCs. And NOCs themselves are embolded by this change.

On the home front, national oil companies are often torn between national expectations that they should carry the flag and their own ambitions for commercial success, which might mean a degree of emancipation from the confines of a national agenda. They are not "just companies," however. Within their borders, they enjoy an unparalleled standing with the public. NOCs are often the best employer. They train young people to the highest standard, develop local technological capability, create opportunities for the private sector and develop the country's infrastructure. But more fundamentally, the historical context of their country's struggle for independence has made national oil companies politically sacred entities. As the former Secretary-General of OPEC stated: "Although several decades have passed since the era of nationalisation, our national oil companies continue to possess a rather unique political status in the eyes of their respective nations. They are still regarded as the symbol of national sovereignty that controls the most important and the most valuable resource endowment in our countries" (Subroto, 1994: 20).

Henri Madelin has explained the ideology of resource nationalism, which took hold of North Africa in the 1970s, as one which combines with a "revolutionary fervour directed towards removing all vestiges of the former subservience. It assumes a socialist color in order to be better designed to signify collective rights to interests accused of the three vices of being foreign, capitalist and private" (Madelin, 1975: 66). There remains a deep emotional attachment to sovereign control over natural resources among many Middle Eastern societies, as is also the case in Latin America. It follows from this that resisting foreign attempts to control oil is a tune that has more resonance in these countries than increasing the performance of the hydrocarbon sector. This might explain why no more in-depth analysis of these key actors has appeared in the Middle East than in consuming countries. People in producing countries should be debating, "Why have an NOC?" The answers would help to establish the priorities of the company—to maximize revenue, to promote national pride or to optimize the development of resources? This question is raised only rhetorically by those in consuming countries who want to see oil in the Middle East privatized. They favor a privatization of the oil and gas sector there because it would allow foreign oil companies to develop more oil for the world's consumers and market forces to overtake OPEC. In the consuming countries, few people ask, "*Why not* rely on NOCs to supply energy to markets?"

From the producing countries' perspective, a high-competence NOC with good governance processes may be preferable to a privatization of the industry that improves access to resources for foreign oil companies. NOCs are by statute, organization and often affinity more responsive to the needs of society and the interests of the state. Under optimal financial management, they can generate more revenue for the state than private companies, which have their shareholders to pay. In fact, in some cases they achieve this despite inefficiencies because the royalties, taxes and dividends they pay to the state are so high. They may also serve the state's foreign policy interests by supplying specific markets, and they are more willing than international oil companies to develop spare capacity in order to balance the world oil markets. Moreover, a number of their community investments have been designed to serve the long-term interests of society. This is the case of programs to train nationals and to develop capacity in the local private sector. However, a key challenge is to establish good governance processes within the NOC and between it and the state that will allow it to develop its competence and to serve national interests efficiently. Finally, some degree of competition from other companies can be a valuable means of stimulating the performance of national oil companies—though it may run into opposition from society.

In spite of the highly politicized national and international environment in which oil is produced and traded, the most relevant and urgent pressures on NOCs are economic and industrial rather than political. In fact, NOC managers are, for the most part, noticeably apolitical, perhaps with the exception of Iran. Their priorities are the allocation of resources for the industry, their operational autonomy and national economic challenges. Indeed, as companies operating primarily at home, they are preoccupied with the difficulty of meeting the needs of society and government as well as investment challenges to the industry. Contrary to a premise that guided my first steps in this research, I found that politics form only a backdrop to the operating environment of NOCs. This observation pointed to a complex relationship between NOCs, their society and their government that is essential to understanding national oil companies.

There are numerous divergences in perspective and interests between society, government and the national oil company. Events in the oil and gas industry carry a political significance for the societies of producing states. Popular political views will shape attitudes to, most notably, foreign investment. Nationals of the major exporting states will also expect oil export revenues to finance a number of public services. This public opinion pressure tends to be exerted on government and to reach the NOC only indirectly. Government is the interface between society and NOC. It is government's role to develop policies to achieve long-term goals, but it deals with contrary interests along the way and responds to short-term threats to political stability. This political process can lead governments to have incoherent goals—for instance, seeking greater revenue from the oil industry while asking the NOC to carry out social programs that hamper its operations and increase its costs. NOCs are instruments of the state and help government achieve a number of policy objectives. But NOCs' managements seek the freedom to manage the industry so as to mobilize the country's oil wealth without government intrusions that would cripple their economic and technical capacity. There is, in this respect, a constant institutional struggle between government and NOC.

This struggle is compounded by power asymmetries. The NOC is powerful because of its knowledge. It has technical and business expertise: it knows the fields and understands how the business works and what it costs. Government, for its part, sets the rules of the game: it determines the targets for the sector and decides whether to introduce competition and invite foreign investment. Society seeks information regarding the NOC's activities and influence over the government's decisions concerning the sector.

This book seeks to explain the complex relationship between the state, society and the NOC, and traces the industrial evolution of NOCs in order to identify new trends in their strategy and identity. National oil companies are evolving, seeking an elusive balance between their national and commercial missions.

Scope and Definitions

It is not my intention to set the national oil companies of the Middle East and North Africa apart from their peers. In terms of the historical importance of oil and the challenges faced by the NOCs in their industrial consolidation, the stories of these NOCs could be told alongside those of the Venezuelan, Mexican, Malaysian or Brazilian NOCs, for instance. NOCs worldwide share a common concern regarding their relations with the state. The geographic focus of this book is an attempt at comparing NOCs that are producers *within* a regional system. In itself, the focus on the Middle East and North Africa is an interesting one: the analysis will show that for all their common cultural, historical and political references, each NOC in this study is unique. It follows that it is not useful to create categories of NOCs. Instead, this book examines the way in which each company is unique and highlights differences between them.

The book focuses on companies with upstream activities because these are the revenue-generating activities that make them so important to their country, as opposed to the "downstream" or refining business, which historically has not been very profitable. Most Middle Eastern producers have very low production costs: some $2 for each barrel of crude oil that fetched around $50 per barrel in 2005 on the international markets. On the other hand, exploring for new reserves is an expensive and risky activity, though a necessary first step in producing oil. The upstream business is also highly charged politically: it is a central battleground of resource nationalism, which seeks to protect hydrocarbons from foreign hands. By contrast, the downstream business is not.

Moreover, in the minimalist definition[1] NOCs are not restricted to those companies owned entirely by government and in possession of exclusive rights over the mineral domain. A number of NOCs have evolved beyond the attributes that initially defined them and, to some extent, protected them. An increasing number of NOCs coexist and cooperate with foreign private companies on national soil. This is the case for ADNOC, Sonatrach, the National

1. I use a minimalist definition of an NOC: it is a company with at least 51 percent state ownership that is active in the exploration and production of hydrocarbons—in other words the "upstream."

Oil Corporation of Libya, Petronas of Malaysia, Petrobras in Brazil, Pertamina in Indonesia, NNPC (the Nigerian National Petroleum Corporation), the Qatar National Gas Company and PDVSA (Petróleos de Venezuela SA). Others have the structure of a private-sector company but with a majority of government shares at the voting level—this is the case for Petrobras of Brazil and Statoil of Norway. The configuration of the industry in Russia and China is still evolving but it includes both state and private-sector enterprises. With the growing commercial focus of most NOCs and the increasingly liberal agenda of governments legislating on these matters, there is more flexibility than in the past regarding the status of NOCs. In this more liberal view, they need not be exclusively state-owned operators of the national hydrocarbon sector. But there are forces within NOCs, state institutions and societies that resist this evolution.

Outline

A look at the history of the national oil companies in the Middle East and North Africa will help us to understand what they are now, how their present-day challenges have taken shape and how they perceive foreign investors and consumers. This history does not define these companies, nor does it determine their behavior; but it is in the background, a part of the producers' collective memory with which an observer of the region must be familiar so as better to understand conversations about the industry today. Chapter 1 therefore examines the history of oil concessions in the region and the subsequent nationalizations. Chapter 2 discusses current attitudes to this history and investigates how it has shaped national oil companies in the Middle East and North Africa. Chapter 3 introduces five national oil companies, the key characters of this book, by looking at their corporate culture, identity and processes.

The story shows that national oil company employees are proud of what has been accomplished since nationalization. But this is no longer a sufficient driver for success. NOCs seek to develop a strong commercial culture, and this permeates the aspirations of most managers. Saudi Aramco, for example, refers to the state as its "shareholder." The current trend in the Middle East and North Africa is one of emancipation from the model of NOCs as instruments of the state. There is a drive to adopt the business practices of private oil companies. Although these are clearly national companies with state ownership of capital, special status in the mineral domain, obligations to the national market and a common history, they say they want to operate like international oil companies (IOCs), and even talk about partial privatization. We will see, however, that the term "privatization" does not carry the same meaning everywhere. In the West, it usually refers to the process of engaging the private sector to provide services or facilities that are regarded as public-sector responsibilities or to shifting from publicly to privately produced goods and services.[2] In the Middle East and North Africa, this term has different meanings, both in different countries and in different sectors of activity. Moreover, even though many people in the industry showed interest in the management practices of private companies, the transition to a commercial culture is not fully implemented in most companies in the region. Many employees want to retain the community engagement that has historically defined their company.

NOCs operate in two very different settings: one is national, laden with obligations and constraints, but it is also where they draw their strength thanks to (sometimes exclusive) access to low-cost reserves; the other is the industry environment, which exists outside the rules of the national setting and in which they must be skilful to succeed. Chapters 4 to 7 look at how national oil companies manage the contending demands of these operating environments.

Chapter 4 focuses on the national setting, and examines the quality of the NOC–state relationship. Are the decision-making processes clear? Are the two parties' roles and responsibilities clearly demarcated? Is there political interference in companies' operational decisions?

Chapter 5 discusses the impact of demographic trends on national expectations regarding the oil sector and the revenues it generates for the state. National cultures are changing with the new generations, notably in respect of the work ethic and the degree of support that nationals expect from the state. Although societies in the region are changing, there are still enduring popular expectations that the state should provide essential services and employment to the population. Interestingly, this is not a matter of public discussion within the major Middle East and North African exporting countries. Nevertheless, this is to some extent part of the national political pact. The legitimacy of the political structure is tied to its oil policy and management of hydrocarbons, but even more directly to its distribution of oil revenues. Public attitudes and the political role of oil specific to each country shape oil policy in terms of exports, investments and the redistribution of wealth.

2. This definition is taken from Gordy Higgins, "A Review of Privatization Definitions, Options, and Capabilities," *http://rru.worldbank.org/PapersLinks/GlobalResults.aspx*.

The stability of these political systems depends on the capacity of the state to continue to generate sufficient oil rent to satisfy the needs of the population. It is in their critical role as wealth-generators that states depend on their national oil companies. (The weight of this political reliance on the growth of the oil rent is discussed in a special contribution by John V. Mitchell at the end of this volume.) In many oil- and gas-producing countries of the region, such as Saudi Arabia, Iran and Algeria, the needs of the population are growing faster than the oil rent. This analysis shows that these countries will need to expand oil and gas production in order to increase revenues but that even under relatively favorable oil revenue scenarios, the hydrocarbon sector will no longer be able to give the same degree of support to the rest of the economy for more than a few years. Governments will need to begin to show success in economic reforms, which have begun in most countries, in order to diversify their economies and reduce the dependence of the rest of the economy on the public sector and of the public sector on hydrocarbon revenues.

The national oil companies' mission will be to take on a share of responsibility for the welfare of the economy (by supporting the private sector, for instance), although success there depends on much wider diversification efforts. Chapter 6 addresses how the growing pressure on government to provide for the population is likely to affect its relationship with the NOC. We examine the evolving mission of the NOCs and how they are responding to growing needs by supporting the diversification of the economy while keeping an eye on their bottom line. Clarifying and improving the financial relationship between the state and the national oil company is important too. This relationship must cause the NOC to reduce costs but leave it sufficient funds to carry out programs of capital expenditure (NOCs' budgets are sometimes exposed to the short-term needs of government).

The NOCs were initially created as instruments of government policy, whose aim was primarily to assert sovereign rights over national resources. In a context of resource nationalism, they were to give the state control over the pace of exploitation and the pricing of its finite resources. NOCs also ensured that the state received an equitable share of profits. Since then, new challenges have periodically prompted changes in their structure and strategy. These challenges have stemmed both from the domestic environment (the national economy and the state's budget, in addition to the political aspirations of the country and leadership as discussed above) and from the external (industrial and geopolitical) environment. Chapter 7 considers the external challenges that make up the NOCs' international operating environment. These challenges include establishing new markets, keeping up with technological trends and responding to new environmental regulations. These are challenges common to all companies in the industry. The question is whether their national operating environment improves or reduces the national oil companies' capacity to respond to these external challenges.

Chapters 8 and 9 examine how the interplay between national constraints and industry drivers translates into the national oil companies' strategy. We will see that the NOCs have different strategic ambitions, both domestically and internationally. Chapter 10 focuses on the prospects for foreign investment in the region and the potential for partnerships. Just as NOCs are increasingly trying to penetrate international markets through upstream and downstream investment, so they often have to deal with increasing penetration of their own national market by international players. Internationalization and, conversely, the opening up of domestic markets to competition are changing the landscape of corporate oil. Chapters 9 and 10 give a glimpse of emerging trends, which point to an increasing blurring of the categories "IOC" and "NOC."

Methodology

Although NOCs play a central role in the economies of the Middle East and North Africa, it is quite striking that there is little scholarly interest in the mechanics and forces animating the oil industry. A survey of sources available in Arabic demonstrated a weak scientific and academic interest in the region's oil and gas industry.[3] There are very few books published on this subject. This is partly because articles are the preferred publication format of the region's academics; and in this format, oil is treated more often as a subject of political commentary than of industry analysis. The main concerns are geopolitics and geostrategy, war and U.S. interests. There is little analysis in Arabic on (nonpolitical) industry concerns. In English and French, the focus has also been on geopolitics and geostrategy since the Gulf war of 1991, which brought oil back into public view. The American and British invasion of Iraq in 2003 reignited the interest of French researchers and journalists in the geopolitical angle of oil, bringing their output closer to the Arab approach.

3. A survey was carried out for the purpose of this book by Dr. Karam Karam at the libraries of the Maison Méditerranéenne des Sciences de l'Homme and l'Institut de Recherches et d'Etudes sur le Monde Arabe et Musulman. Publications at the Center for Arab Unity Studies were reviewed as well. Internet resources in French and Arabic were consulted too. Please refer to the bibliography at the end of this volume for full details.

Whatever the language, there has been little interest in studying national oil companies, whose activities generate most of the regional governments' revenues—not to mention a large share of the world's oil production. NOCs work mostly behind the scenes. The aim of this book is to shed some light on the drivers, goals and challenges that they face and to point out some emerging trends of consequence for countries importing and exporting hydrocarbons. The lack of available data on national oil companies and the importance of understanding the producers' perspective prompted me to seek interviews with the national oil companies. These interviews are the book's primary source of information.

There are methodological limitations to relying on interviews. Facts and analysis vary from one interviewee to the next. To minimize the risk of giving too much weight to one interview, precautions were taken in analyzing the data. Consideration was given to the specific expertise of the interviewee—I would give different weight to the relevance of a refiner and a petroleum engineer talking about the upstream business, for example. Also, a large number of interviews were conducted in each company—between 14 and 36. Contentious statements reproduced in these pages, for instance a critical comment about the company, were confirmed by at least one other interviewee in the company. When diverging stories have been told, I reproduce both versions and constrast them in order to highlight the complexity of perceptions.

In addition, all companies were given an opportunity to respond to drafts of this text. Saudi Aramco, NIOC and Sonatrach offered comments on the analysis, many of which were incorporated in the book, and corrections of inaccuracies, which were carefully noted. The companies did not agree with all the statements made by their employees, but they did not object to the study being published on the understanding that these statements are not fact but perceptions of facts. This is also how the reader should consider what follows.

For all these methodological limitations and caveats, the interviews are an extraordinarily rich source of information. The picture one gets is nuanced and complex, which was particularly useful for this study given that much of the current information on NOCs in the Middle East and North Africa is incomplete or skewed ideologically. In fact, I had not initially planned to base this study so extensively on interviews, but this changed when I realized the eagerness of the national oil companies to tell their stories. I was surprised at their willingness to reveal as much as they did about their internal functioning and their perceptions of their environment. As a result, it seemed important to convey as much as possible of this new insight.

Indeed, in view of the reputed inaccessibility of NOCs in the Middle East, it came as a surprise that my requests for interviews with the companies and governments of Algeria, Saudi Arabia, Kuwait, Abu Dhabi and Iran were all greeted very favorably. I was given extensive access to all levels of management after an initial stage of explaining the study's purpose and that interviews would not be attributable. The significance of this access became apparent once I learned more about the NOCs: they are all engaged in a process of redefining themselves and attempting to find an appropriate balance in their relations with the state. This study was therefore timely, and many people in governments and the companies felt that the research would be a valuable external and independent contribution to an existing national debate on these issues. In both Iran and Algeria, for instance, controversial bills were recently introduced to their parliaments whose purpose is to redefine the relations between state and NOC.

Another reason for the receptiveness of the five NOCs to the study was their desire to be benchmarked. In this regard, they showed a great deal of interest in and curiosity about NOCs outside the region, notably Petronas (Malaysia), Statoil (Norway) and Petrobras (Brazil). As a result, additional interviews were conducted with the management of those NOCs. A number of respondents in the five NOCs also felt that they knew very little about how other NOCs operated and how they dealt with common challenges.

Some companies were more willing to open their doors than others. Algeria and Kuwait were quickly receptive to this research and to the idea of interviews within their ranks. One of their first concerns was how to benefit commercially from the findings of the study. Kuwait Petroleum Corporation's culture is one of open debate and self-examination. Algeria's Sonatrach is developing internationally and seeks greater exposure through specialized publications. Saudi Aramco, the National Iranian Oil Company and the Abu Dhabi National Oil Company took longer to convince. It is entirely justified that commercial entities should be cautious about accepting an outsider's request to collect data on their strategy and outlook. However, as I became more familiar with these companies, it became apparent that the initial reluctance to participate in the study was due to a specific corporate culture. This is changing, and these companies are communicating more and more with the outside.

NIOC and ADNOC have a more domestic focus than the other NOCs studied. For Iran, the national market is quite significant. Moreover, NIOC has not been exposed to international forums to the same degree as the others because it is operating under a U.S.-imposed embargo. ADNOC operates a complex system of consortia with private-sector international oil companies, mainly the original concessionaires, but the focus is on the technical challenges of developing the oil and gas. For Saudi Aramco, 2004 was a challenging year, because its estimates of reserves and production capacity were questioned by commentators outside the region. The company responded with new disclosures of data and an unusually bullish public relations effort. There is change under way within the company. Previously, it had built its reputation on concrete actions rather than words, in a strategy reminiscent of ExxonMobil's, and it also tended to leave public relations to the Ministry of Petroleum and Mineral Resources. But a number of its executives have been pushing for effective communication strategies, and the company has taken some courageous steps in that direction.

Interviews were conducted with approximately 120 people in 2004, primarily in the national oil companies of Saudi Arabia, Algeria, Kuwait, Abu Dhabi and Iran but also with the ministries of energy, planning and international affairs of these countries and with four regional banks. I met as well not only with managers from Petronas, Petrobras and Statoil, as noted above, but also with managers of Russia's Gazexport and executives at the private oil majors Total, BP, Shell, ChevronTexaco and ExxonMobil. Interviews were conducted under the "Chatham House rule": I could use the information I gathered but could not attribute it to a source. They were semidirective in character: as the interviewer, I would guide the discussion with a planned set of questions (though the selection and sequence of questions would be adapted to the discussion) but would allow the interviewee to answer freely. (The questionnaire is reproduced in appendix 1.) Those interviewed in the companies included the chief executive and his senior and mid-level deputies in such functions as corporate planning, marketing, refining, international affairs, distribution, petrochemicals, production, finance, exploration, new business development, research and development, human resources and public affairs. (The structure of each company is illustrated in appendix 2.) In interviewing employees from the most senior officer to the more junior managers, my intention was to gather a full range of perspectives from various generations and levels of seniority. Further, I spoke with four of the five oil ministers and with several ministry officials in each country.

The data from the interviews is supplemented by John Mitchell's macroeconomic analysis of the role of the petroleum sector in each national economy. This analysis is designed to emphasize in rough terms the dependence of the non-petroleum sector on the petroleum sector. A set of simulations of production, revenues and foreign exchange balances shows in broadbrush terms how long, and how far, these dependences can be sustained under various combinations of oil prices, production policies and adjustments in the non-petroleum economy.

Though past trends will be discussed in the first chapters, the objective of the book, as suggested by the chief executive officer of one of the NOCs, is to look forward and give a glimpse of future trends. Our forays into the past will therefore be limited; and throughout, they are designed to offer the historical context for emerging trends. As we shall see, new trends are carried by the post-oil boom generations, innovative industry partnerships, forward-looking strategies and policies and the ambitions of national oil companies.