THE OXFORD INSTITUTE FOR ENERGY STUDIES

MAY 2015: **Issue 100**

forum

A QUARTERLY JOURNAL FOR DEBATING ENERGY ISSUES AND POLICIES

This is the one hundredth issue of the *Oxford Energy Forum*, a quarterly publication that Robert Mabro started back in 1990 to stimulate debate on the key drivers shaping energy markets and energy policies. This special issue is dedicated to Robert Mabro who founded the Oxford Energy Policy Club in 1976, the Oxford Energy Seminar in 1979, and the Oxford Institute for Energy Studies in 1982. The fact that these institutions still thrive today is testament to his strong leadership, deep vision, sheer determination, great intellectual ability and, not least, his extraordinary bonhomie. Over the last 50 years, Robert's many insightful books, articles, and papers have enriched our understanding of energy markets, the behaviour of the various players, the dynamics within OPEC, and the interaction between governments and oil companies. With his writing and through the various institutions he created, he has persistently tried to bring producers and consumers closer together, despite his recognition of the challenges involved and the wide divergence of interests. In this issue, some of Robert's many colleagues and friends reflect on the man and his work: the diplomat, the interlocutor, the friend, and above all, the generous intellectual and thinker whose deep insights and intellectual integrity keep shaping and influencing our ideas in so many ways.

The issue begins with a personal memoir reflecting on a key episode in the oil market and about which little information and detail are known. Based on unpublished documents, media comments and dispatches of the time, and personal logs, *Adrián Lajous* reflects on the 1998–9 oil price crisis, revealing some unknown facts about the secret negotiations that brought together Venezuela, Saudi Arabia, and Mexico in an attempt to stabilize oil prices in the first quarter of 1998. His account of events unveils some fascinating details and reveals the complexity involved in negotiations between oil producers and the interactions between OPEC and non-OPEC countries. In forging the agreement on output cuts only a few individuals – Mabro being one of them – played a key role, and his role in these negotiations has been only partially recognized.

Ibrahim Al-Muhanna's article sheds light on Mabro's role not only as a writer and analyst, but also in bringing parties with divergent interests together. His memories of Mabro's talks with OPEC governors and ministers behind the scenes remind us how Mabro was an effective intermediator, a friend, and a behind-the-scenes diplomat, who engineered an opening up of the different oil market interest groups to one another.

CONTENTS

Bassam Fattouh reflects on the most recent oil price fluctuations (since June 2014) and asks what Robert Mabro would say about them. Fattouh argues that every oil price cycle has its own special features and this one is no different: the advent of the US shale revolution, the associated shifts in crude oil and product trade flows, the entry of a new set of players with a new business model, and the changing nature of the geopolitical risks, just to mention a few. However, some fundamental features have run across all previous cycles: the problem of excess supplies, rising levels of inventory, the over-investment question, OPEC behaviour and its relation with non-OPEC producers, the fundamental trade-off between maximizing revenues and maintaining market share, and the role of market sentiment. Fattouh reviews Mabro's analysis of the 1998–9 oil price crisis and his views on these features, arguing that Mabro's intellectual edge in analysing the oil market can be attributed to his extraordinary ability to understand and identify the fundamental questions facing the oil market and to brush aside transient factors.

Giacomo Luciani revisits Mabro's work on the oil price crises in 1985–6 and 1998, commenting on the most recent oil price collapse in 2014–15. Luciani recalls Mabro's view in 1986: that Saudi Arabia had already given up its role as a swing producer at times of falling oil prices, in favour of taking on the role of a 'fixed-volume producer'. Luciani argues that today's non-OPEC producers continue to rely on OPEC to cut output in response to price declines, while OPEC producers essentially place the burden of cuts on Saudi Arabia. However, Saudi efforts to signal to the market have, in his view, been ineffective in the absence of remedial action. Much in line with Mabro's work, he points to the market's dire need of reform and for a more coordinated approach between producers to reduce price volatility as recently seen by the market.

In two separate articles, *Mark Moody-Stuart*, and *Nordine Ait-Laoussine* and *John Gault* reflect on Saudi Arabia's role on the oil market through the lens of Mabro's work. Moody-Stuart reminds us of Mabro's work during the 1980s and 1990s, when non-OPEC production was repeatedly forecast to decline about five years out from the forecast date before technology (in the form of improved seismic imaging, deep water drilling, and horizontal wells) repeatedly pushed this decline further into the future. This long historical perspective of the industry, Moody-Stuart says, puts the present rise of shale oil production in context. Saudi Arabia's historical advantage remains access to low-cost oil reserves; Aramco's status as a highly adaptable company; and the Kingdom's solid market access, built strategically over many years, which also forms part of the Saudi influence on OPEC. But Moody-Stuart warns that Saudi Arabia's prominent position may be threatened by uncontrolled domestic energy consumption driven by subsidized fuel, electricity, and water prices.

Ait-Laoussine and Gault argue that the challenge facing OPEC is even greater today than it was in 1986 and reinforce one of Mabro's messages that the current strategy of seeking market share is likely to prove costly for OPEC in the medium term. The authors argue that OPEC should reconsider its current strategy and adopt a plan that would reverse the foreseeable revenue loss.

Pedro Haas draws comparisons between Saudi Arabia's role in the 1980s and in the current cycle. The differences in details, Haas points out, cannot obscure the fact that the current Saudi oil policy shares its DNA with the Saudi oil policy of the 1980s and is based on a deep understanding of the need to preserve the role of oil and the corresponding Saudi production volumes. Haas argues that one of the implications of Saudi Arabia's current decision is to push other OPEC members to accept a new normal and a lower price point, reflecting a new equilibrium in the market.

Oil and development in the Arab world

Ali Aissaoui reflects on the legacy of Mabro's work in the area of oil and economic development or, as Aissaoui argues, the illusion of development as we perceived it. He reminds us how Mabro, as always ahead of his time, had begun to look at economic diversification policies in Egypt during the early 1970s. Aissaoui moves on to pick up from where Mabro left off, with a closer look at today's debate surrounding the economic diversification of the oil-rich economies of the Middle East. Looking at the GCC economies in greater detail, Aissaoui emphasizes the vulnerability many of these economies experience as a result of their continued dependence, for much of their economic output, on the export of oil; and arguing that today, with flat demand, greater uncertainty about the future direction of prices, and growing domestic fiscal needs, these countries face even more dire threats.

Paul Stevens looks back at Mabro's contribution to our understanding of the role oil has played in Arab economic development. The three dominant themes around which Mabro's work has focused:

- concern over sustainability,
- emphasis on the central importance of developing human capital,
- rejection of the concept of 'resource curse',

are undoubtedly as relevant as ever, and Mabro's views still guide the debate today. The Arab Uprisings, Stevens argues, offered a brief glimmer of hope, but for the most part these glimmers have been extinguished, at least for the time being. Stevens calls for more political and economic reforms to be made in the Arab world, to unleash the enormous talents, abilities, and imaginations of the Arab private sector, releasing it from the shackles of the kleptocracies that have dominated the region for centuries.

This is followed by *Majid Al-Moneef*'s memories of Mabro as a sceptic of the

day's theories back in the 1980s, and his contribution to providing critical analysis at exactly the right time.

Energy security

John Mitchell traces the beginnings of Mabro's work on energy and oil markets. Looking back at 1973, the time of the Arab oil embargo, he provides a valuable perspective of the trend, at the time, to study energy primarily within the 'energy security' paradigms. The search was for solutions which would defend the USA and the OECD, he notes, rather than developing a system for governing oil trade and investment which both sides would find it attractive to support. When Mabro's work emerged, it gave a very different perspective of the issue of energy security; namely that a 'solution' would involve both producers and consumers.

David Robinson revisits Mabro's views on energy security and explores four questions of interest today:

- the issue of defining energy security,
- the question of how oil importers should manage the risk of supply disruptions;,
- the idea that unconventional oil and gas resources could provide the USA with a greater sense of energy security,
- the puzzle of how lower oil prices will affect all the above.

In his article, *Jonathan Stern* revisits lessons drawn by Mabro during the 1980s on the security of gas supplies in Europe. Looking at today's Ukraine conflict, Stern sees the same kind of bargaining problems and political disagreement mix as was perhaps feared during the 1980s, when a major policy question was whether and where Europe would be able to secure sufficient gas to meet demand. Part of Stern's response is to ask where Europe's alternatives to Russian gas this decade are. He also links this discussion to an often underrepresented element in today's vast media hype around the security of Russian gas supplies, and that is the question of price security.

The producer–consumer dialogue

In two separate articles, *Walid Khadduri* and *Ian Skeet* look more closely at Mabro's role in promoting dialogue between producers and consumers in response to what, during the 1970s and 1980s, emerged as 'the oil problem'. Mabro's motivations in doing so developed, as Skeet highlights, in response to a set of market problems that still very much define oil markets today:

- the risk of national or regional conflict to affect oil supply,
- under-investment in producing countries,
- a slack market that threatens an oil price collapse.

And, as Khadduri emphasizes, Mabro's work contributed significantly not only to bringing parties together but also to removing barriers, and to dispelling what Mabro calls some damaging misconceptions and irrational fears.

CONTRIBUTORS TO THIS ISSUE

Majid Al-Moneef is Secretary General, and member, of the Supreme Economic Council of Saudi Arabia and the Supreme Council of Saudi Aramco

Ibrahim A. Al-Muhanna is Senior Advisor to the Minister of Petroleum for the Kingdom of Saudi Arabia

Ali Aissaoui is a Research Associate, Oxford Institute for Energy Studies

Nordine Ait-Laoussine is President of NALCOSA and a former Algerian oil minister

Bassam Fattouh is Director of the Oxford Institute for Energy Studies

John Gault is Co-Director, Executive Master in International Oil and Gas Leadership, The Graduate Institute, Geneva

Pedro Haas is Director of Advisory Services, Hetco

Walid Khadduri is former Editor-in-Chief of MEES

Adrián Lajous is Senior Fellow in the Center on Global Energy Policy at Columbia University. He was the CEO of Pemex from 1994 to 1999

Giacomo Luciani is Adjunct Professor at the Graduate Institute (Geneva) and Scientific Director of the Master in International Energy, Paris School of International Affairs at Sciences-Po (Paris)

John Mitchell is Associate Research Fellow at Chatham House

Sir Mark Moody-Stuart is Chairman of Hermes Equity Ownership Services, a director of Accenture and of Saudi Aramco. He was Chairman of the Royal Dutch/Shell Group from 1998 to 2001. He was Chairman of Anglo American plc from 2002 to 2009

David Robinson is Senior Research Fellow at the Oxford Institute for Energy Studies

Ian Skeet is a Research Associate, Oxford Institute for Energy Studies

Jonathan Stern is Chairman at the Natural Gas Research Programme, Oxford Institute for Energy Studies

Paul Stevens is Distinguished Fellow at Chatham House

The Mexican, Saudi, and Venezuelan connection – a memoir

Adrián Lajous

Robert Mabro played a key, if unaccredited, role in the secret negotiations that brought together these three countries, in an attempt to stabilize oil prices in the first quarter of 1998. These had gradually eroded in the fourth quarter of 1997 and tumbled in the last two trading days of that year. The spot price of Brent averaged US$19.30/bbl from January to November 1997 and dropped below US$16 on 31 December. As it turned out, this was only the beginning of a deep and lengthy price collapse. Prices continued to plunge in 1998 reaching US$11.05 on 17 March, further descending to 10.77 in mid-June, and 9.91 by Christmas Eve. On 11 December 1998 I sent a short handwritten note to President Zedillo letting him know that Pemex had sold cargoes of Maya crude for US$5.68/bbl the previous day, a drop of 64 per cent from the average realized price of October 1997. Not only had the price of internationally traded oil reached very low levels, but the price differential between Brent and Maya crudes was widening due to increasing volumes of discounted Venezuelan crudes flowing to the US Gulf Coast. In spite of three major production cuts agreed by oil exporters, the price of Brent did not again breach the US$18 threshold until 6 July 1999, having remained below this level for 19 consecutive months.

'AS IT TURNED OUT, THIS WAS ONLY THE BEGINNING OF A DEEP AND LENGTHY PRICE COLLAPSE.'

This memoir draws on memoranda that I wrote, other unpublished documents in my files, personal logs, media comments and dispatches of the time, and notes from a diary that Mabro kept at the time. It is also based on my own recollection of events that happened 17 years ago; these were necessarily influenced by later conversations with four key actors: Prince Abdulaziz bin Salman, Alberto Quirós Corradi, Humberto Calderón Berti, and Robert Mabro. The subjective nature of this narrative has an intrinsic bias difficult to correct: it tends to portray an exaggerated image of the role played by its author. More importantly, it hardly deals with the perennial issue of different actors and witnesses having different recollections of the same event. However, the undoubted central figure in this episode, in the overall management of the 1998–9 price collapse and in international oil affairs over the past 20 years, has been Ali al-Naimi, the minister of Petroleum and Mineral Resources of Saudi Arabia. I keep in my office a photograph, with a kind message in Arabic, in which I am shaking hands with him in the gardens behind the Algerian Embassy in The Hague, while the final press communiqué was being typed. It was taken at the end of a long set of tripartite meetings that began on 21 March 1998 and extended for almost a year. In this last meeting we were joined by the oil ministers of Algeria and Iran. Unfortunately, the Mexican energy minister was not able to attend.

Mexican motives

On 17 December 1997 the Mexican intergovernmental committee on international oil trade (COCEP) was informed of the deterioration in market conditions and the increasing competition with Venezuela in the US Gulf Coast. The Pemex–Shell joint venture in the Deer Park refinery had acquired a number of cargos of heavy Venezuelan crude for delivery in January and February, at prices that implied a US$1/bbl discount with respect to Maya. This was particularly problematic as Pemex was in the process of approving the terms and conditions of new long-term supply contracts, which included a light/heavy crude differential protection that incentivized and committed buyers to install delayed cokers. Pemex was seeking to expand the demand for heavy crude in US Gulf Coast refineries and in Mexico, which would provide a stable home for Maya crude.

Over the holidays I began to consider the possibility of a Mexican initiative that might contribute to the recovery and stabilization of rapidly falling prices for its crude oil exports. An agreement among producing countries would be required for an immediate and substantial reduction in global supply, as well as a more orderly behaviour by the two most important regional suppliers of heavy crude, who were both increasing their production capacity. It was essential to achieve a new *modus vivendi* between Venezuela and Mexico, and between Saudi Arabia and Venezuela. Changes in short-term policy were needed, as well as the clearing up of misconceptions regarding their respective intentions. For this to happen, a modicum of trust had to be re-established and this could only be done through dialogue and eventual negotiation.

Early in January 1998 I came to the conclusion that Mexico could potentially play a constructive role in the search for a compromise among producers. First, we needed to reduce the tension between Venezuela and Saudi Arabia by facilitating direct contact. Second, Mexico could offer a relatively modest reduction in actual and planned exports. This could have a significant symbolic value, encouraging

other non-OPEC exporters to cooperate and contribute to an atmosphere that might facilitate an agreement within OPEC. Third, a renewed contact with the Venezuelans could clear up misunderstandings that arose from the intense competition taking place in the heavy crude oil market, as a new expansive phase of production got underway in both countries.

'MEXICO COULD POTENTIALLY PLAY A CONSTRUCTIVE ROLE IN THE SEARCH FOR A COMPROMISE AMONG PRODUCERS'

I was well aware that the probability of success of such an initiative was limited. It could face a sudden death if the Saudis or the Venezuelans rejected a Mexican mediation or had a preference for another intermediary. The diversity and intensity of the underlying conflicts of interest among producers were substantial. Building an understanding that would accommodate short- and longer-term objectives between countries with very different economic and oil industry structures was particularly difficult. Political conditions in the Middle East and North Africa were a source of bitter strife. However, if successful the potential benefits to Mexico were significant and the short-term up-front costs relatively small. Mexico was in a privileged position that could allow it to take the first step. It had a capital of goodwill accumulated in previous market stabilization and crisis management efforts; and a solid commercial reputation in international markets, characterized by its transparency. Its cultural affinities with the Venezuelans, the experience of managing a joint oil cooperation programme in Central America and the Caribbean, and longstanding industry relationships were relevant assets. Finally, the fact that it was not part of OPEC gave it greater flexibility and Mexico was unencumbered by the burden of cumulative grievances and misunderstandings with respect to past negotiations and mutual compliance complaints.

I wrote two long memoranda to President Ernesto Zedillo, both titled *Oil Diplomacy*, one dated 13 January and the second 2 March. The first examined market conditions and prospects, proposed cooperating with other producers, and assessed the risks of taking the initiative and participating in negotiations. The other, an 18 page double-spaced note, contained a more detailed discussion regarding the execution of our strategies, proposing explicit marching orders for the Ministry of Energy and the State oil company, on the basis of which we could coordinate our actions. I gave the first memo to the minister a few minutes before we entered the president's office. After reading it he recommended prudence and suggested that I should not be too persistent with my proposals as the president would be hesitant to explore the recommended course of action. Fortunately he was wrong. The president read the memo carefully in silence, asked a few clarifying questions, and basically agreed to the proposal. I felt obliged to mention that I understood that he might have some reservations regarding what was put forward in the paper he had just read. He answered that he did have some misgivings, but that they were spelled out in the memo and that we did not have many options.

My own apprehension with respect to the effects of lower oil prices was becoming more concrete. On 14 January the Mexican Minister of Finance, Angel Gurría, announced the first of a series of Federal Budget adjustments directly linked to the fall in oil revenues. The original budget approved by Congress considered a price premise of US$15.50 per barrel for the Pemex export mix. This assumption was lowered by US$2 on the basis of the price erosion in the previous fourth quarter and first two weeks of January. The estimated annual decrease in revenues was equivalent to 0.4 per cent of GDP. Pemex was asked to reduce its own projected operating and capital expenditures. Before the end of March a second Pemex 1998 budget cut was implemented. The rigorous and prompt response of the government to lower prices, and eventually to lower volumes, reflected the deep commitment to fiscal discipline and to maintaining macroeconomic balances, as the country recovered from its devastating 1995 financial crisis.

Pemex had previously managed to convince the government of the need to authorize significant capital increases for the large-scale and complex Cantarell heavy crude expansion project, and the full reconfiguration of at least two of its refineries, so that they would be able to run additional volumes of this type of crude oil. These projects had been launched in early 1997. Their timely and orderly execution was at risk if prices and revenues continued to fall. For these reasons price recovery was absolutely critical for Pemex.

On 15 January I held a press conference in Mexico City that touched on market conditions and prospects for 1998, the recent sharp fall in oil prices, their implications for the Federal Budget and for cuts in Pemex capital expenditures. My price assessment at the time was wrong, having concluded that we were facing a significant fall in oil prices, but that it would not turn into a price collapse similar to the one in 1986. The main difference could be found in the fact that global excess capacity was small in comparison to that which prevailed in the second quarter of 1985. This would allow price overshooting to be eventually corrected during the year. At the time it was difficult to imagine the magnitude of the fall in global demand triggered by the Asian and the Russian financial and economic crisis, the

reduction in the growth of consumption in other emerging economies, and the slow expansion of demand in industrial countries. However, I did recommend that Mexico had to be prepared for lower prices and greater price volatility, but I made the mistake of trying to sooth public opinion regarding these matters.

Privately I was much more concerned, and a bit depressed, by the lack of response by major oil producers. I shared my worries with Mabro over the phone in mid-January. We agreed to meet in Oxford the weekend of 24–25 January (I would be on my way to a Repsol Board of Directors meeting in Madrid), for leisurely conversation, good wine and, if possible, a touch of intrigue. When we met a mood of gloom and pessimism prevailed. I sought his advice regarding possible courses of action by Mexico, the sequence of eventual conversations with Venezuela and Saudi Arabia, and the risks of a potential Mexican initiative. His final recommendation was negative. He thought that it was still too early to make any move, that the main actors had not yet really felt the pain of lower prices, and that it would be wise to wait for some sign that they might engage. His prudence further distressed me.

Mabro reacted with what he did best: he wrote a short provocative piece for the February 1998 issue of the *Oxford Energy Forum* titled 'Whither Oil Prices?',[1] which was immediately translated into Arabic. It managed to initiate a serious conversation with a number of friends and some foes. He was pleased by the comments that he received and happy to engage in more structured discussions. On 9 February he received a phone call from Prince Abdulaziz who wanted to pursue the topics covered by his paper. As it turned out, it was a key exchange of ideas that launched the process that was being sought. Mabro later told me that he had identified a positive attitude and a will to sort out the main issues we were dealing with. He then talked with Suleiman al-Herbish and Majid al-Munif, high-level officials in the Saudi Ministry of Petroleum, who also praised his article. More importantly, he agreed to meet Munif in Tokyo on 24–26 February, where they would both be attending a conference and have time to chat.

'I CONTINUED TO BE UNEASY ABOUT THE REACTION OF THE SAUDIS TO ANY FORM OF MEXICAN MEDIATION.'

The week of 15 February I called Mabro at home several times. He conveyed his conversations with the Saudis and discussed their content from various angles. By then he had come to the conclusion that the time was ripe for a Mexican initiative, as neither the Venezuelans nor the Saudis were prepared to make a first move or recognize that they were now hurting because of falling prices. On the contrary the tension between the two would increase during the next three weeks due to statements and op-page articles made by Erwin Arrieta and Luis Giusti (Venezuela's minister of Energy and Mines and president of PDVSA, respectively) as well as by other members of the Venezuelan petroleum establishment, all blaming the Saudis for their current predicament and reiterating their refusal to cut production. I confirmed to him that Mexican government officials would try to meet with their Venezuelan counterparts as soon as possible and explore their conditions for meeting with the Saudis. I continued to be uneasy about the reaction of the Saudis to any form of Mexican mediation.

From Tokyo Mabro conveyed to me that Munif had no objection to the government-to-government meeting between Mexico and Venezuela. Back in Riyadh, he phoned Mabro on 3 March after speaking with Ali Naimi and Prince Abdulaziz. They seemed to be happy about our rapprochement with the Venezuelans. However, they were not yet ready to talk to the Mexican minister or other Mexican officials directly. They seemed to be reluctant to respond immediately over the phone and preferred to continue our communications through Mabro, who kept me briefed. This saved them from potential embarrassments. In any case they wanted to assess and corroborate independently what I had been conveying to them through Mabro. I was frustrated but understood that in these matters you must check and double check everything and try to maintain deniability.

The distrust between Venezuela and Saudi Arabia ran deep and the Venezuelans appeared to be doing everything possible to make it more acute. Saudi-Venezuelan relations had begun to sour in the mid-1980s. It was not a secret that Sheikh Yamani and Arturo Hernández Grisanti did not get along with each other. The involvement of these two oil ministers in managing the 1986 price collapse fully revealed the tensions between them. More fundamentally, the development of the extra-heavy crude oil resources of the Orinoco Belt grew to become a veritable bone of contention. Many Venezuelans believed that this type of crude, given its specific pattern of extraction and its upgrading requirements, ought not to fall within the scope of OPEC production regulation. As development and production activities advanced in this area, the issue of the Venezuelan production quotas came to the forefront. With the opening – the Apertura – of the Venezuelan oil industry to international investment and more aggressive investment and development plans in the Orinoco Belt, pressure built up for the recognition of this exemption. A current of opinion in that country believed that their interests would be better served by simply exiting OPEC. In the 1997–8 juncture, this view was

reflected in the strident statements by Luis Giusti that Venezuela would never reduce its production, no matter how low prices fell. They understandably angered the Saudis. Later, when issues of compliance with OPEC agreements were being discussed, Arrieta unfortunately characterized this organization as a club of Pinocchios, where everybody lied to each other. This did not help to improve mutual goodwill between two OPEC founding members.

Miami secrets

The Mexican energy minister was now fully committed and offered to set up a meeting in Miami with Arrieta and Giusti for 4 March 1998. All three had been invited by Sheik Yamani to a Center for Global Energy Studies meeting with a revealing title: 'Oil, power and regulation in Latin America: from state monopoly to private investment'. I travelled separately, took a large comfortable suite in a hotel far from the one where the Yamani conference was taking place. The Mexican energy minister arrived with Arrieta and Giusti, and to my surprise with Alberto Quirós, a former CEO of Maraven, Lagoven, and Shell Latin America. The meeting was kept secret from other high-ranking Venezuelans present at the Miami conference.

The Mexican minister and I succeeded in what we had hoped to achieve in Miami. Initially, the Venezuelans responded rigidly and blamed Saudi Arabia for the situation. After a while they softened their positions. At the end we agreed on six basic points:

i. Mexico would establish direct contact, at a ministerial level, with Saudi Arabia in order to organize a meeting with Venezuela that would break the *impasse* between these two countries;
ii. Venezuela was willing to talk to the Saudis if quotas and cuts from established production quotas were not discussed;
iii. the Venezuelans were prepared to put on the table cuts from current production levels;
iv. discussions would only relate to short-term market issues while longer-term investment programmes and production targets would not be addressed;
v. Mexico would also make a contribution to a global reduction of oil supply;
vi. preparations for further meetings would remain secret.

With this understanding in hand we were ready to talk directly with the Saudis. Once back in Mexico I asked Mabro to convey to the Saudis our desire to set up a phone conversation between the Mexican minister and Ali Naimi, so that he could explain what had transpired in Miami.

'THE VENEZUELAN CHANGE OF HEART WAS STRICTLY TACTICAL.'

The Venezuelan change of heart was strictly tactical. Giusti's commitment to opening up the oil industry to private investment and his conviction that heavy crude production not be subject to OPEC collective decisions remained intact. The Caldera government would only restrain the more radical expressions of these policies, but would continue to condone the lack of compliance to committed production cuts throughout 1998. It would not be until February 1999 that the Chávez administration, with Ali Rodríguez as oil minister, would be prepared to comply with OPEC production agreements.

Saudi reticence and mistrust

Various time lags were making the negotiations more difficult. Although Mabro kept Munif fully briefed, we were not able to dent the prevailing circle of mistrust. On 8 March 1998 Munif conveyed the scepticism of the Saudi minister with respect to Venezuelan behaviour, and saw no advantage in talking with Mexico. The Saudis had kept on reading the Caracas media with a certain delay and were incensed. It took them time to receive and translate press reports. They missed the subtle change toward moderation that was taking place and did not fully understand that lower-level executives and officials could continue to follow old directives and that their statements were difficult to control in a less centralized environment. We were rebuffed by the Saudis. Munif told Mabro that they had decided to give Rilwanu Lukman, the Secretary General of OPEC, the opportunity to broker a solution within the OPEC structure. Mabro reported this in almost real time and I conveyed to Quirós Corradi what was happening.

On 7 March, Youssef Yousfi, the Algerian oil minister, arrived in a private jet in Caracas for talks with the Venezuelans. He had dinner with Arrieta, Giusti, Calderón, and Quirós. They shared with him the content of our conversations in Miami and talked about possible courses of action. The following day they would be having lunch at PDVSA. Giusti never arrived. The others continued their talks with Yousfi. He then flew to Riyadh where he met Ali Naimi on 11 March, confirming the agreement we had reached with the Venezuelans. This independent corroboration would allow us to move forward. Yousfi had proposed, since the beginning of 1998, a more ambitious plan that included a general realignment of production quotas within the OPEC framework, which the Saudis did not favour. However, he clearly understood the importance of the pending negotiations among OPEC members and with non-OPEC exporters, and supported them. The Saudis did not feel comfortable with Yousfi because of his strong links with the Iranians and the Libyans, among others.

After the Yousfi visit to Riyadh Prince Abdulaziz finally made contact with Mabro on 12 March. He continued to be mistrustful of the Venezuelans and was still influenced by previous statements by them that had lost relevance. After some mutual recriminations between them he agreed to talk to me directly. He told Mabro that he knew me well, saw me at OIES board meetings, and trusted me. Soon after, I received two long calls from the Prince, one on Thursday 12 March and the other on the morning of 13 March in Tlayacapan, where I had locked myself up for a long weekend in my cottage in the mountains south of Mexico City, to write a speech that I had to deliver on 18 March, the anniversary of the nationalization of the oil industry in Mexico.

'APPARENTLY THE SAUDIS NOW BELIEVED THAT THERE MIGHT BE A WAY OUT OF THE *IMPASSE* WITH THE VENEZUELANS.'

Mabro phoned immediately after his conversation with Prince Abdulaziz. He had given him my telephone numbers and thought that he would call shortly. Apparently the Saudis now believed that there might be a way out of the *impasse* with the Venezuelans. Our first conversation gave me some hope. He first complemented me for the interaction with the Venezuelans and for extracting their agreement to basic principles that could possibly allow a constructive interchange. We were making some progress but he was still unable to commit. I was not yet convinced that the Prince had the full backing of Ali Naimi on these matters. At times I felt that other channels of communication were at play. The issue of the venue of the eventual meeting then came up. He insisted that it should be in Riyadh. This was the only secure place where we could be effectively isolated from the media. He was right, but convincing the Venezuelans was not going to be an easy task.

The window for a meeting with the Saudis and the Venezuelans was very tight. The Mexican minister and I were not available before the evening of Friday 20 March. I had to present the Pemex annual report and deliver a speech in south-east Mexico before President Zedillo on 18 March. Arrieta and Giusti would be travelling to Europe with President Caldera on 14 March. This meant that we must have everything decided by then and that we could not meet before 21 March. There was an additional overriding time constraint: the OPEC Conference would meet in Vienna on 30 March.

The flow of phone calls between Tlayacapan, Oxford, Riyadh, Caracas, and Mexico City did not stop from Thursday to Saturday. Fortunately I was able to take most of them from the terrace in front of my cottage. Mabro called to assure me that the Saudi minister was now fully on board. He had continued to talk with Prince Abdulaziz and was convinced that it was the case. The Prince had clearly done a good job. I called Quirós to share what was happening and posed the issue of meeting in Riyadh. I insisted that the question of venue was secondary and that going to Riyadh could turn out to be a good solution. He warned me that his principals in the Venezuelan government would be reluctant to accept. They felt that they would be losing face after a long standoff and appear to have caved in to Saudi power and arrogance. Not only would they have blinked first, but had in fact surrendered to their rivals. After a long discussion, and a number of calls, the Venezuelans accepted. I went to sleep thinking that we were now close to a deal.

In these circumstances the proposed solution was that Ali Naimi should personally invite the Venezuelans and the Mexicans to Riyadh. We needed, however, to get the Venezuelan agreement first. With this in hand I had to give proper assurances to the Saudis that the invitation would be accepted. The Prince and I discussed multiple options that might accommodate the concerns of all involved. Some of these were rather elaborate and even extravagant, if not impractical. I sat down to draft what could be the script for the minister's eventual conversation, which would be circulated beforehand, so that there would be no surprises. As it turned out it was only useful to clarify things between the Prince and me. We were running short of time. On Saturday 14 March Mabro called at 9 a.m., my time. Prince Abdulaziz had confirmed that Ali Naimi was ready to invite the Venezuelan and Mexican ministers to visit him in Riyadh. However, the Saudis had some final doubts that morning. They were finally resolved after the Venezuelans agreed to a full moratorium on further comments to the press by all the parties involved.

I first needed the Mexican minister's authorization. He was engaged in very complex trade union negotiations in the electricity sector. I managed to reach him and obtained his endorsement. Then came the Venezuelans, who were about to fly to Europe. By this time we only had 15 minutes to agree on the detailed contents of what would be a brief teleconference between the three ministers. Time differences – 13 hours – were working against us and the clock was ticking away. An agreement was finally reached. The ministers were then on the phone and the Saudi invitation was gracefully accepted by the other two members of the trio. After this I drank two double tequilas to celebrate. The following morning I was back to the less exciting task of writing a speech.

On the way

Immediately after reaching an agreement with Ali Naimi and Erwin Arrieta, the Mexican energy minister

set up a dinner appointment in Oslo with Marit Arnstad, the new Norwegian petroleum and energy minister, for the evening of 19 March, on our way to Riyadh. Our objective was to convey the content of the conversations we held with the Venezuelans and the Saudis, and to elicit their own participation in curtailing global oil supply. Bringing in another major and well-regarded non-OPEC exporter would add significant weight to the overall effort and would also provide Mexico with some cover with respect to possible criticism in Mexico and in other OECD countries. The Norwegian minister promised to give our request her full consideration, wished us luck in our endeavours, and posed some of the limitations, both statuary and political, that she faced. What was important at the time was that she did not say no. The following morning a press release acknowledged the meeting with the Mexican energy minister, mentioned that the current oil market situation was discussed, and that the ministers agreed to remain in close contact.

'BRINGING IN ANOTHER MAJOR AND WELL-REGARDED NON-OPEC EXPORTER WOULD ADD SIGNIFICANT WEIGHT TO THE OVERALL EFFORT.'

On the trip from Mexico City to Oslo we had to change our connections after landing in Amsterdam instead of the scheduled stop in Frankfurt. This meant that our baggage would not arrive in Oslo and that we would not receive it until after the Riyadh meeting. I phoned Prince Abdulaziz asking for his help. The Mexican minister and I then flew from Oslo to Madrid where we held a meeting at the Torrejón airport with our Venezuelan colleagues and the Algerian oil minister. The encounter was brief; we ratified the overall content of the conversations with the Saudis and confirmed that productions cuts would be discussed in Riyadh. Yousfi would not be participating in the meeting. Much later I learned that the Venezuelans and Yousfi had dined the previous evening at the Algerian Embassy in Madrid. The Venezuelans explained that they were searching for an ally who could help neutralize OPEC members that might try to block a Saudi-led agreement.

Humberto Calderón Berti, a former Venezuelan minister, joined the group. It was politically significant that Arrieta had invited Quirós and Calderón to come, as they were not part of the Caldera government. I was pleased, as I knew both of them well from previous contacts in both bilateral and multilateral negotiations. The presence of two experienced men of substance was critical. Their candid advice to the minister, and the counterweight they exercised to Giusti's more aggressive positions, moderated the Venezuelan fury at their Arab colleagues. We then flew with the Venezuelans in their plane that took us to Riyadh. It was full and uncomfortable, but we managed to talk non-stop with Arrieta, Calderón, and Quirós. Giusti would fly directly from Paris.

Weekend in Riyadh

We arrived late on Friday 20 March at the Royal area of the Riyadh airport and both teams were directly taken to the government conference palace, thus ensuring that our presence remained unknown to the media. We remained ensconced in this building until we went back to the airport on Sunday. Kindly, Prince Abdulaziz had a tailor waiting for us and both the Mexican minister and I had two full sets of clothes ready the following morning. On Saturday we had a long morning session that allowed our ministers to confirm the agreements they had reached over the telephone, commit to specific cuts, and review the probable support from other countries. Later we attended a dinner offered by our host Ali Naimi at a Saudi Aramco tent in the desert. Much time had been spent drafting the final communiqué of the meeting and press releases by each of the three countries. The first one simply stated that the oil ministers of Mexico, Saudi Arabia, and Venezuela met in Riyadh and had decided to undertake an effort, together with other OPEC and non-OPEC producers, to withdraw 1.6 to 2.0 million b/d from the crude oil market. They confirmed commitments by others of approximately 1.1 million b/d.

'THIS MET WITH ALI NAIMI'S PROPOSAL THAT SAUDI ARABIA WOULD MATCH THE SUM OF THE VENEZUELAN AND MEXICAN CUTS.'

The other three press releases announced a cut in production by Saudi Arabia and Venezuela of 300,000 and 200,000 b/d, respectively. The Mexican communiqué of 22 March was more specific. It disclosed that the Ministry of Energy had instructed Pemex to reduce its crude oil export programme by 100,000 b/d with respect to the volume realized in the first quarter of 1998, estimated at 1.84 million b/d, a cut of 5.4 per cent over the next three quarters. This met with Ali Naimi's proposal that Saudi Arabia would match the sum of the Venezuelan and Mexican cuts. On this occasion, as in previous ones, Mexico's commitment was expressed in terms of exports, not production, given that a large fraction of the total crude produced was domestically consumed. This was not the case of other major exporting countries, with the exception of Russia. All Mexican statements stressed the sovereign, unilateral nature of its cuts.

On Sunday morning we flew back to Madrid, where we said goodbye to our Venezuelan friends. Our lost baggage was waiting for us at our

rooms at the Ritz. I called Mabro to comment on events, read to him a draft of the Mexican press release, and shared my misgivings. The most important one was the inclusion in the final communiqué of the target cut of 1.6 to 2.0 million b/d. I firmly believed that this range was unfeasible and its announcement unnecessary.

The Vienna anticlimax

On Monday 23 March President Zedillo gave a speech in Mexico City where he acknowledged the effects of the Asian financial crisis and the fall in oil prices on the Mexican economy, carefully explained Mexico's participation in the Riyadh meeting, and reasserted the need for prudent macroeconomic management. The following day the minister of finance disclosed a further reduction in the Mexican crude oil mix price assumption to US$12.50/bbl, new oil revenue estimates from lower prices and lower volumes, and further cuts in the 1998 federal and Pemex budgets. The costs of adjustment to the price fall would continue to mount.

There were still two pending questions in our negotiations: the response of the Norwegians to Mexico's request for a production cut and the invitation to Mexico to attend the meeting of the OPEC Conference in Vienna as an observer. Both came at the very last moment. The Norwegian parliament had initially voted down the government's proposal to cut production. However, Mabro received a call from Jens Stoltenberg, whom he knew from the Oxford Seminar. He had been minister of trade and energy from 1993 to 1996 and at the time chaired the standing committee on oil and energy in Parliament (he would later serve twice as prime minister and is currently Secretary General of NATO). He explained that the Opposition was not averse to a production cut, but had voted against it for purely political reasons. They had reversed their decision and now supported the minority government to go ahead with the cuts. He added that the minister of energy would shortly publish a press release announcing a cut of 150,000 b/d, equivalent to close to 5 per cent of the estimated 1998 production. The previous evening I had received a draft of their 27 March press release. The Norwegians preferred not to attend the OPEC Vienna meeting in spite of their generous contribution.

The Mexican minister had decided early on that he would not participate in this meeting, but would send members of his staff to represent him. This would preclude any further negotiations within the OPEC framework. On Friday 27 March I called Rilwanu Lukman, the Secretary General of OPEC, and touched on the subject of the invitation to the Vienna meeting. He politely explained that such an invitation was the prerogative of the President of the Conference, who was expected to arrive in Vienna early on 29 March. This response was difficult to fathom but it did not particularly worry me. The invitation was finally extended hours before the meeting started. Ricardo Samaniego and Lourdes Melgar, from the ministry of energy, were on standby in Vienna and were able to attend the meeting. Ali Naimi had previously asked the Mexican minister to send representatives for follow-up conversations.

The Conference lasted only one day. After the intense communications and discussions of the Riyadh three, and their conversations with other producers, the debate at the OPEC Vienna Conference came to a prompt close. It agreed to cut 1.245 million b/d from current production, as estimated by selected secondary sources. The individually pledged figures would not constitute new quotas and the cuts were intended to be in place from 1 April until the end of 1998. In light of its exceptional circumstances Iraq was not called to participate in the agreement. OPEC also recognized the production cut pledged by non-OPEC exporting countries. It is interesting to note that there was no mention in the opening address of the meeting, or in the final press release, of the important contribution by Norway. They only referred to the participation of Oman and Mexico.

The media liked to characterize the efforts deployed by the Riyadh trio as cloak and dagger diplomacy in distant scenarios: Algiers, Amsterdam, Cancún, Caracas, The Hague, Madrid, and Vienna, among other cities. They complained about the secrecy of these meetings and preferred the circus atmosphere that surrounded OPEC gatherings. The players thought that keeping the meetings private was necessary, given the complexity of the negotiations, the uncertainty of their success, and the stakes involved. They wanted to come out in the open when they had something to tell. The changing context in which these meetings took place, and the long period it might take prices to fully recover, required discretion. Throughout this period Mabro continued to talk with the media and with opinion makers, carefully clarified issues, corrected mistaken perceptions, and provided background that helped understand what was happening.

Much less justifiable had been the dysfunctional secrecy imposed by OPEC members with respect to their crude oil production and export data, and their reliance on estimates from secondary sources. Mexico always argued that oil producers are better served by full transparency and timely disclosure of the relevant statistics. This would improve their understanding of market conditions and give greater credibility to their commitments. For these reasons it has published

for years detailed oil sector statistics on a monthly basis, less than 30 days after the end of any given month. More recently it has also released selected daily data.

'HIS ANALYSIS OF THE STATE OF THE OIL PRICE REGIME AND OF OIL MARKET CONDITIONS WAS INSIGHTFUL.'

In May 1998 Mabro published an OIES working paper entitled 'The Oil Price Crisis of 1998'.[2] His analysis of the state of the oil price regime and of oil market conditions was insightful. He also derived important lessons from the negotiations carried out by producers from Jakarta to Vienna, via Riyadh. It is worthwhile reading today. His active participation in the events described in this memoir was later recognized by the governments directly involved, as was his wider contribution to engagements among producers and to the dialogue between producing and consuming countries. He was decorated by the governments of Mexico and Venezuela and, on the occasion of the third OPEC Summit, was distinguished by King Abdullah with a major prize in the field of petroleum research. With this memoir I want to pay tribute to his intellectual generosity; his tireless work in building three sister institutions at Oxford: the Oxford Institute for Energy Studies, the Oxford Energy Seminar, and the Oxford Energy Policy Club; and, of course, his extraordinary bonhomie. I have been privileged by a friendship that began in 1979.

A second part of this narrative will cover the efforts that were deployed and the difficulties that were faced in achieving oil price recovery during the rest of 1998 and the first half of 1999.

Notes

[1] 'Whither Oil Prices?', Robert Mabro, *Oxford Energy Forum*, February 1998, Issue 32, pages 15–16.
[2] 'The Oil Price Crisis of 1998', Robert Mabro, OIES Working Paper SP10, 1998.

Robert E. Mabro: beyond scholarship to decision making

Ibrahim A. Al-Muhanna

If you have worked in the energy industry, been involved with oil policy making, or been in any way connected to the oil market during the last 35 years, there is a small handful of people whom you will know. You will have read their work, listened to their talks and, if you were lucky, engaged with them in a rewarding discussion. One such individual is the inimitable Robert E. Mabro.

His importance and contribution to knowledge go beyond being a distinguished analyst and a great 'brain-stormer'. He is a scholar, par excellence, with highly respected academic studies behind him. Yet he has also engaged in the decision-making process, not only in his capacity as trusted advisor and consultant, but as a man who has multiple connections – which he is able bring together. Different people, from different backgrounds, and with different agendas – but Mabro could get them together and, crucially, get them working towards a common goal.

It was, and remains, a rare skill.

Promotion of dialogue

Among his many achievements, Mabro made a major contribution to the success of the dialogue between oil producers and consumers in the 1990s, and helped forge stronger cooperation between OPEC and non-OPEC oil producers following the collapse of the oil market in 1998.

He is truly an oil man with principle, not simply a business person looking for financial return. He is an intermediary who brings people together free of charge and for the good of everybody.

He organized two important international energy activities, which brought people together; the Oxford Energy Policy Club a (forum for senior executives which met twice yearly) and the Oxford Energy Seminar (an annual energy-brainstorming meeting). Both brought together official decision-makers and analysts from all parties (OPEC, non-OPEC producers, consumers, as well as industry) in meaningful discussions. He was well known, and highly regarded, as one of the best-connected men in the world of petroleum.

'HE IS TRULY AN OIL MAN WITH PRINCIPLE, NOT SIMPLY A BUSINESS PERSON LOOKING FOR FINANCIAL RETURN.'

I was introduced to Mabro in the late 1980s by Prince Abdulaziz bin Salman bin Abdulaziz Al-Saud, now Vice Minister, then the Advisor to the Minister of Petroleum. The price of oil was recovering after its big collapse in the mid-1980s, and following the restructuring of the Saudi oil industry. Mabro's opinion was that Saudi Arabia had to engage more – publicly and

privately – with all international energy actors (producers, consumers, non-OPEC, oil industry, energy institutes, experts and consultants, and the media). He used to say that the energy market and industries are not fragmented, they are truly connected. And in the long term, he said that oil producers, consumers, and industry should – and would – converge. This was also the belief of former Oil Minister Hisham Nazer and HRH Prince Abdulaziz. We therefore started developing relationships with other actors; these gradually led to bilateral annual discussions with many specific countries including the USA, Japan, Korea, the UK, France, Russia, China, Norway, among others. It was the right approach. Getting to know people and being well connected is very important, and you never know when you might need these connections.

Events following the 1990 Iraqi invasion of Kuwait

On 1 August 1990, Iraq invaded and occupied Kuwait. As a result, the international oil market lost about 5 million b/d of supply, and the oil price jumped from US$20 per barrel to US$35. Saudi Arabia was working day and night to re-balance the market and bridge the gap. But King Fahd wanted an OPEC agreement before Saudi Arabia could increase its production. We called for an extraordinary meeting.

However, at that time, the Algerian minister was president of the Conference and was against holding such a meeting. He was supported by one or two countries and OPEC cannot meet and take decisions without the agreement of all members. Therefore, we had to work hard to pressure others to agree. We also needed to make sure that international media and other actors supported such a meeting, with the clear goal of allowing members to produce what they could. Countries which could increase their production supported the idea, but those who could not were against it, preferring a higher price. I was asked to work in London during the month of August. My main responsibility was to be in close contact and daily communication with international media, oil consultants, and the market at large, and also with Jeddah, where I would speak with HE Minister Nazer and HRH Prince Abdulaziz.

In London, I communicated closely with Mabro. He was fully supportive of holding the extraordinary OPEC meeting and of efforts to end the OPEC production ceiling – allowing oil producers to increase production. Through his connections and because of the high esteem in which he was held – both within OPEC and by the international media – he was of great help in persuading the Algerians and some other OPEC members of the importance of having an official meeting to increase their production. He used to tell them privately: 'it is good for OPEC and for you and your image', adding that if they did not do it, the Saudis might go it alone regardless. After a lot of persuasion through many channels, the president of the OPEC Conference agreed to have a ministerial meeting. It was held in Vienna at the end of August, 30 days after the Iraqi invasion of Kuwait.

At this time, there was no communication at all between OPEC and the IEA, official or unofficial. Each organization did its business as if they were enemies.

At the beginning of the OPEC meeting in Vienna, we had a big and unexpected surprise. The Iranian oil minister called, through the media, for IEA members to release their strategic reserve before OPEC increased its production. The IEA responded, also via the media. Prince Abdulaziz was instrumental in forwarding communications. Mabro played a supporting role. It was the first contact, official or unofficial, between the two organizations and set in train a relationship that is completely unrecognizable today.

'HE WAS AN IMPORTANT PLAYER, BRINGING TOGETHER THE DIFFERENT OPEC, NON-OPEC, AND IEA PARTIES.'

Mabro was in consultation with all oil parties during these developments. He was an important player, bringing together the different OPEC, non-OPEC, and IEA parties. This led later to the creation of producer–consumer ministerial dialogues; the first meeting was held in Paris in 1991, evolving later into the International Energy Forum.

Collapse of oil market in 1998

The second important occasion where Mabro contributed to international official dialogue and communication came in 1998. At the beginning of that year, oil prices collapsed. Two major problems needed to be solved before recovery was possible:

- Non-OPEC producers must be persuaded to cut production in line with OPEC.
- Venezuela must be brought into line with OPEC.

The Venezuelan government was adopting a policy of increased production and their priority was market share over any OPEC discipline. Its policy was a major factor in the collapse of the oil market, in addition to the Asian financial crisis.

Prince Abdulaziz started thinking and working with Mabro to find a solution to the problem. Mabro was a close friend of Adrián Lajous (then president of Mexico's national oil company, Pemex) who, together with Prince Abdulaziz was a member of the board of the Oxford Institute for Energy Studies.

Lajous had a clear influence within the Mexican government. At the same time, Mexico had a leading role and influence within Latin American countries, including Venezuela. So Mexico could reduce its production, and could pressure the Venezuelans to reduce their production, in order to adhere to a new OPEC quota.

Mabro, who had great relationships with all parties, and with no personal interest whatsoever, lent his assistance. He and Prince Abdulaziz both helped to put pressure on Mexico to be part of any production cut, and on Venezuela to end its unconstrained production policy.

'THE WORLD NEEDS MORE ROBERT MABROS TO MAKE FURTHER OUTSTANDING CONTRIBUTIONS …'

This effort led to a major meeting in Riyadh in March 1998 between the three countries. Many more meetings took place during that year and the following year, with more countries joining the group wishing to reduce production and rebalance the market. In the end, it worked. Oil prices rallied from mid-1999 to the present day, and this was welcomed by producers, consumers, oil companies, industries, and financial institutions.

Conclusion

It is clear to me that Mabro's contribution and importance go beyond being a distinguished scholar and author, and an honest and frank, free-of-charge advisor to all. He played, as an individual, an important role in global energy policies. The world needs more Robert Mabros to make further outstanding contributions, and to help foster communication and understanding between all parties.

The current oil price cycle and reflections on Mabro's work

Bassam Fattouh

Between 2011 and mid-2014, the oil price traded within a very narrow range, with quarterly average Brent prices exceeding the US$100/bbl mark for 14 consecutive quarters. This relative stability has been remarkable given the various shocks – ranging from macroeconomic shocks, to geopolitical shocks, to unplanned outages, and to supply shocks – that have hit the oil market. This relative price stability, however, was disrupted and since June 2014 the oil price has fallen sharply and price volatility has intensified. While multiple factors can account for the recent fall in the oil price, the role of OPEC and its dominant player, Saudi Arabia, has received special attention. This should come as no surprise. Mabro has always argued that OPEC's output decisions (including the decision not to adjust output) matter the most in a 'weak' and 'over-supplied' market, and not in a tight market when OPEC is producing close to its maximum capacity.

'MABRO HAS ALWAYS ARGUED THAT OPEC'S OUTPUT DECISIONS … MATTER THE MOST IN A "WEAK" AND "OVER-SUPPLIED" MARKET …'

Every oil price cycle has its own special features and this one is no different: the advent of the US shale revolution, the associated shifts in crude oil and product trade flows, the entry of a new set of players with a new business model, and the changing nature of the geopolitical risks are just a few of them. However, there are some fundamental features that have run across all previous cycles: the problem of excess supplies, rising levels of inventory, the over-investment question, OPEC behaviour and its relation with non-OPEC producers, the fundamental trade-off between maximizing revenues and maintaining market share, and the role of market sentiment. Mabro's intellectual edge in analysing the oil market can be attributed in part to his extraordinary ability to understand and identify the fundamental questions facing the oil market while brushing aside transient factors; it goes without saying, he had very strong views about all these fundamental issues.

The problem of excess supplies

The root to any sharp fall in the oil price is *ex ante* 'excess supply' whether actual or perceived. This oil price cycle is no different. A period of high and stable oil prices generated demand, supply, and investment responses (though with a lag) strong enough to shift market perceptions from oil scarcity to oil abundance. While geopolitical disruptions and unplanned supply outages masked some of these demand and supply responses for a prolonged period of time, the high oil price (and technological developments) unleashed powerful forces that had a profound impact on oil market dynamics. Slower oil demand growth than originally expected, high non-OPEC supply growth driven by US shale oil, the easing of disruptions in the second half of 2014, and OPEC not adjusting its output resulted in large

stock-builds in 2014 which continued well into the first half of 2015.

Mabro has always been very precise about causality, which runs from excess supplies due to a disequilibrium in supply/demand, to inventories, to prices. In a seminal paper[1] (quotations from which appear in this article), he argues that it is '*excess supplies which initially cause stock levels to rise, and it is excess supplies which depress prices at the near-end of the term structure, and ultimately may cause a contango to obtain*.' But for Mabro, the problem does not stop here as the contango '*in turn provides an inducement to build stocks'*. As a result, '*a vicious circle is set in: excess supplies through this causal chain create a situation in which new demand exceeds consumption requirements and adds to stocks. Excess supplies lead to further excess supplies. The contango feeds on itself until storage facilities, including tankers, become so full as to raise the marginal cost of additional stocks to very high levels*.'

There is one aspect of Mabro's reasoning that is quite problematic. Demand for inventories for speculative purposes should support the front price, and rather than widening the size of the contango, it should have the opposite effect. Mabro, however, was of the view that a high level of inventories, together with concerns that storage tanks can reach their maximum limit, reinforces the market perception of over-supply, exerting downward pressure on the front end of the price curve, widening the spread, and giving private players the incentive to accumulate more stocks. This problem of large stock-build, rooted in '*a disequilibrium in the supply/demand relationship is aggravated … by the "sentiment" that producers intend to pursue aggressively an output objective'*. Negative sentiment will push punters in futures and other derivatives markets to sell and '*whenever the willingness to sell exceeds the willingness to buy prices fall, as this is the only way in which an imbalance between* ex ante *intentions can yield an* ex post *equilibrium. On this count too prices immediately fall*.' In Mabro's thinking, negative sentiment is induced by changes in market fundamentals and changes in perception about the behaviour of key producers.

Was Saudi Arabia's response unexpected?

For Mabro, it was very clear that it is the marginal barrel that sets the oil price, regardless of the size of the spare capacity in the system. Producers should therefore avoid forcing 'excess supplies' into the market as this policy is self-defeating: the decline in the oil price will offset the impact of any increase in volumes and as a result total revenues would fall. The quickest and most effective way to clear excess supplies is for producers to cut production, reversing the trend of rising inventories. No producer disagrees with this simple principle. The disagreement arises as to who should bear the burden of the output cut, especially if the needed cut is large.

'FOR MABRO, IT WAS VERY CLEAR THAT IT IS THE MARGINAL BARREL THAT SETS THE OIL PRICE …'

Mabro was very much aware that producers, both within and outside OPEC, would try to shift the burden of the cut to Saudi Arabia, the dominant producer within OPEC. But he was sceptical whether this would ever work, especially in the aftermath of the 1986–8 events, which saw Saudi Arabia's production fall to very low levels in an attempt to defend the oil price. As he puts it, '*the point that Saudi Arabia has been making consistently since 1985, backed by its policy in 1986 which was a genuine price war, seems to have sunk in. Saudi Arabia's willingness to cut output on its own to influence the course of oil prices could not be taken for granted. In fact nobody could realistically expect to see such willingness ever emerging again*.' In this current cycle, the message also took a long time to sink in: up until the OPEC meeting in November 2014, many market analysts believed (or perhaps were hoping) that Saudi Arabia would come to the 'rescue' and put a floor under the oil price.

Mabro recognized that any future cuts should not be limited to OPEC, but should be shared by non-OPEC countries for the simple fact that '*OPEC no longer includes in its membership all the relevant exporting counties* and therefore *it only provides a partial framework for effective policy making'*. Therefore, he advocated that OPEC producers find '*imaginative ways* [to secure] *the involvement of outside exporters in policy making without attaching them to the Organisation with formal ties'*, which remains an elusive goal as recent events have shown. He argued that '*the co-operation issue does not concern large exporting countries exclusively … production increases by small producers, in aggregate, can also cause similar damages. And small producers are equally vulnerable to the reduction in revenues stemming from a fall in price. They have a fundamental interest in co-operating; not as we are often told to take a free ride*.' While this logic applies to small players such as shale producers, the decentralized decision-making process and the fact that these are private players make it very difficult, if not impossible, to cooperate on output cuts.

The perils of market share

Mabro was very critical of those producing countries seeking market share whatever the cost, as the interest of exporting countries should

be '*in revenues, not in volume as such, and not in prices as such* for the simple reason that *there is an interdependence between prices and volumes'*. Specifically, '*attempts to increase volumes against an inelastic demand would cause prices to fall by more than the volume increase. And changes in oil prices do not necessarily result in commensurate changes in oil production*.' Mabro was very cynical of people '*who persistently advocate that OPEC should pursue a market share policy come what may, that is maximise volumes without worrying about the price impact'* and that these people '*are not offering sensible advice'*.

However, he was pragmatic enough to recognize that there are some exceptions and for a dominant producer – such as Saudi Arabia with a large reserve base and idle capacity – there are other objectives that would shape their oil policies. Therefore Mabro argues that '*there are situations, as in 1986 for example, when the collapse in Saudi Arabia's export volumes was so significant as to require a drastic price war to improve the position on the volume front'* but he adds that '*outside these specific instances the pursuit of market share by an oil exporter or a group of exporters is not a sensible policy because the costs involved can be very high during its implementation and the future benefits too distant and too uncertain*.'

Thus, while recognizing that the revenue objective remains key for any producer (given such countries' high dependency on oil revenues) the revenue objective should not be treated in isolation from other objectives (such as maintaining production volumes 'at reasonable levels') for big producers such as Saudi Arabia. Maintaining reasonable levels of production would ensure that idle capacity is not so low that prices could not be stabilized in case of disruption, while not so high to keep downward pressure on the oil price (avoiding a large loss of market share to competitors). A trade-off will always emerge for any country faced with multiple objectives but a limited number of tools. Mabro's main concern was that under certain market conditions, the 'market share over revenue' trade-off could prove very costly with no clear benefits.

'PRICE WARS … CAUSE HUGE LOSSES AND DO NOT ACHIEVE THEIR OBJECTIVE, WHICH IS TO ELIMINATE THE COMPETITION.'

While accepting that price wars are unavoidable to enforce discipline and cooperation among producers, Mabro was very aware of the costs involved in such a strategy. He argues that '*price wars … cause huge losses and do not achieve their objective, which is to eliminate the competition*. To succeed in eliminating competition, prices have to fall below costs. But this may not prove to be enough. Expectations also matter and therefore prices have '*to fall a long way and price expectations have to remain depressed for a long time for a significant improvement of the market share of those who launch an oil price war'*. He was sceptical whether any oil-exporting country '*has the financial resources which enable it to sustain such a policy'*. The current cycle shows that some producing countries have managed to accumulate large financial buffers and thus the ability to withstand a period of low oil prices; this ability, however, varies tremendously across producers, which in turn affects the incentive to cooperate.

The investment question

For Mabro, oil market conditions at a certain time should not be treated in isolation from past investment decisions. The adjustment mechanism in the oil market is far from smooth: the oil market can witness long periods of surplus capacity followed by periods of shortages of capacity relative to demand. Furthermore, these alternating states of the oil market affect investment decisions and, hence, future supply availability and long-term productive capacity. While OPEC is not an organization which aims to coordinate investment plans among its members, Mabro was wary of producing countries increasing their productive capacity without any consideration of global demand or other producers' investment plans because '*an investment race pursued blindly can have similar effects to those of a price war'*. Therefore, '*if exporting countries want to protect their revenues through co-operative action they need to address the price, the volume and the investment issues in their interaction'*.

Communicating to the market

Mabro was very aware that in a more complex oil market with a more diverse set of players, many of whom have no interest in the physical commodity, an effective communication strategy is key to a successful oil policy. After all, OPEC is in the game of signalling its intentions to the market, in the hope that the market would react to such signals, smoothing the adjustment process. Therefore, Mabro argues that '*the presentation of a policy or an agreement is important. This requires skills and more particularly a deep understanding of how the oil market functions, how it forms its views, and how it responds to news*.' Therefore, he calls on exporting countries to invest resources in personnel with these particular talents. But for Mabro, it is not only a matter of presentation, but also a '*matter of substance*' otherwise the market would consider OPEC signals as cheap talk. Surprisingly, he advocates '*transparency*' in oil policy and provision of data, as it '*may serve better the interests of oil-exporting countries than the leaking of distorted information on production,*

'IN A MORE COMPLEX OIL MARKET … AN EFFECTIVE COMMUNICATION STRATEGY IS KEY TO A SUCCESSFUL OIL POLICY.'

investment plans and the like'. He also recommended '*silence*' when there is nothing to say as it '*has great merits when there are misunderstandings between major players* [as] *public statements in such a situation only deepen the rift to the detriment of all parties' interests*.'

Conclusion

Mabro was visionary in many respects. His deep understanding of the structural challenges faced by producing countries enabled him to look beyond transient issues and appreciate the constraints on oil policy. His deep understanding of the oil market and the evolution of the behaviour of players also enabled him to detect changes and emerging trends well before they became apparent to others. More than a decade ago, he recognized that the '*mind set which determines the conception of policy has been shaped by old experiences and traditional ways of approaching problems. This mind set is far too rigid and does not appear to be sufficiently relevant to the challenges posed by the oil market*.' Throughout his career and in his writings, Mabro has always tried to identify these challenges, drawing lessons from past cycles, challenging the conventional wisdom and established truths, and proposing 'imaginative' ways to broaden the mind set.

Note

[1] 'The Oil Price Crisis of 1998', Robert Mabro, OIES Working Paper SP10, 1998.

Saudi Arabia and the limits of signalling

Giacomo Luciani

'Exporting countries, and more generally, the industry, have much to learn from oil developments in recent months. Lessons can be derived from an analysis of the causes of the oil price fall …' Robert Mabro wrote this in 1998, and added: '*An opportunity has now arisen for oil-exporting countries, both from within and outside OPEC, to re-think the framework and substance of their co-operative policies. … The oil price crisis may prove deeper than initially thought and may remain immune for a while to the remedy which OPEC and other oil-exporting countries are trying to apply*.'[1]

The 'oil market' – this difficult-to-define collective entity, which, through its collective 'sentiment' or 'consensus', determines the going prices for various contracts or 'paper barrels', which in turn conditions the prices of physical barrels – has an extraordinarily short memory. Several commentators have rushed to argue that today's situation is different from that in 1985–6, and again from 1998, while in fact there is a simple common feature: there is too much oil in the market at prices that have for too long remained unreasonably high.

The dynamics of the oil market are characterized by a succession of delusions and corrections. Trading in paper barrels feeds some widespread delusions – beliefs that cannot possibly withstand critical analysis, yet which come to be accepted as received wisdom. Such delusions are not promptly corrected in a market which – rather than moving towards an equilibrium of global demand and supply – allows profits to be made by those able to guess in which direction collective sentiment will go. As the price is driven further and further away from equilibrium by invented explanations, eventually reality catches up and a sharp correction ensues.

Events and beliefs leading to overproduction

Between 2010 and 2014, the market was influenced by the belief that the Arab Spring and consequent political turmoil in the region would affect global oil supply. There was little or no empirical basis for this belief – as was recognized by all those who said that the price really should be lower, and attributed the difference between actual and equilibrium prices to a so-called 'political risk premium'. But why and how such a premium should be paid was not clear. It was especially unclear how prices higher than equilibrium prices could avoid leading to overproduction.

'THE DYNAMICS OF THE OIL MARKET ARE CHARACTERIZED BY A SUCCESSION OF DELUSIONS AND CORRECTIONS.'

For at least three years it was evident not just that supply was exceeding demand, but also that the balance of possible developments was clearly in favour of further increases of supply in excess of demand. For several years we kept hearing that oil shale in the USA would constitute a revolution, but somehow it was assumed that the revolution would have no consequence on prices. Or we had the IEA stating that almost all potential

resources, including such high cost and speculative plays as the Arctic, would be commercially viable at current prices, while no one believed that prices could drop significantly.

The position of OPEC – and Saudi Arabia

Behind this inconsistency was the mistaken belief that OPEC – read Saudi Arabia – would cut production to defend the price level. The notion of 'fiscal break-even' was put forward to justify the belief that oil-producing countries needed a certain minimum level of prices, as if there is any good reason why market prices should validate what individual producing countries think they need. In the case of Saudi Arabia, the assumed fiscal break-even point was in any case significantly lower than prevailing prices, but 'the market' found comfort in the knowledge that government expenditure was increasing rapidly in the Kingdom.

'LESSON ABOUT THE LIMITS TO SAUDI ARABIA'S DEFENCE OF PRICES SHOULD HAVE BEEN LEARNED A LONG TIME AGO.'

Expenditure was indeed increasing rapidly simply because the money was available, and it is difficult for a government to refrain from spending when a very large reserve has already been accumulated, at a time when several societal demands remain to be met. This does not mean, however, that a certain level of prices is needed; this is because expenditure can, to some extent, be reduced, reserves drawn down, and even possibly some government debt issued. Hence the notion that Saudi Arabia would necessarily reduce production to sustain prices was wrong.

The lesson about the limits to Saudi Arabia's defence of prices should have been learned a long time ago. Writing in 1986, Mabro commented on the speech given by Sheikh Zaki Yamani to the Oxford Seminar on 13 September 1985: '*The message, which is also the key to a correct assessment of Saudi Arabia's position was simply that "Saudi Arabia is no longer willing or able to take that heavy burden and duty, and therefore cannot be taken for granted." The burden was placed by "the non-OPEC producers relying on OPEC to protect the price of oil" and by "most of the OPEC member countries* [which] *depend on Saudi Arabia to … protect the price of oil*."'[2]

Ever since, Saudi Arabia has consistently rejected the role of swing supplier – one which somehow keeps being attributed to the Kingdom. Again in 1998 Mabro noted: '*Saudi Arabia, in a very unusual way, has been playing the role of fixed-volume supplier, very different in essence from that of a swing producer who varies output according to changes in world demand, since a big fixed-volume producer does not mitigate the impact of excess demand or supply which emerges from time to time on the world market*.'[3]

The role of 'price takers'

In fact, the Kingdom has repeatedly demonstrated that it feels responsible for increasing production whenever there are unforeseen supply shocks elsewhere in the global oil system and for this reason it maintains a reserve of unutilized capacity of approximately 2 million b/d. But Saudi Arabia is not ready to decrease production below what it considers 'normal', and in any case it makes any decrease conditional on cooperative behaviour on the part of other producers, OPEC and non-OPEC. '*At some point during this period* [1997] *Saudi Arabia began to observe that a small number of OPEC countries, and many more outside OPEC, were benefiting from substantial production increases. … To see others increasing production while you are staying put* [or expected to decrease yours] *is not a pleasant experience. … Sooner or later Saudi Arabia was bound to respond*.'[4]

Why is it, then, that 'the market' systematically appears to misread the intentions of Saudi Arabia? Mabro then wrote: '*To reduce the likelihood, or at least the intensity of future price crises, the exporting countries need to improve their understanding of market behavior and to develop the skills of how to talk to markets*.'[5] The problem lies in the fact that Saudi Arabia, together with all other major oil-exporting countries, is not active in the market, it just talks to the market. Saudi Arabia and other such countries have thus confined themselves to the role of 'price takers' when they should in fact be 'price makers'.

Signalling and active engagement with the market

The art of 'talking to the market' is one that loses effectiveness as it is practiced, because the market comes to expect certain statements and no longer takes them at face value. The strategy of signalling is doomed to failure if it is not coupled with active engagement in the market. One cannot blame Saudi Arabia for not trying. In fact, in May 2009 King Abdullah took the very unusual step of declaring that a price of US$75–80/bbl would be 'fair' for both exporters and importers. This was a very important statement – obviously of more importance than similar statements habitually extracted by journalists from the Minister of Petroleum whenever he appeared at a public event. The price band indicated by the King was also strikingly close to the level of prices then advocated by major political leaders in industrial countries.

'THE ART OF "TALKING TO THE MARKET" IS ONE THAT LOSES EFFECTIVENESS AS IT IS PRACTICED …'

But the market was not impressed. Prices climbed well beyond the higher end of the band indicated by the King, and nothing much happened. Rather, on several occasions the Minister just declared that whatever price was prevailing at the time was 'perfect', thus ratifying the collective wisdom of 'the market' and implicitly acknowledging that the Kingdom was powerless to steer prices in the desired direction.

It is clear that 'talking prices down' is something that Saudi Arabia finds difficult to do, because this attitude is easily interpreted as being politically motivated and subservient to outside interests. Even now, notwithstanding the evidence of excess supply, there is no lack of proponents of various conspiracy theories, according to which the Kingdom has engineered a collapse in prices to break the back of this or that country in order to please Washington, or to pursue its own regional goals. Signalling is, by definition, something that can only be done from time to time and entails discrete policy shifts, it is not an efficient way to steer the market on a day-to-day basis. The latter requires being active in the market – in other words, being a price maker rather than just a price taker and occasional commentator.

Approaches to active engagement and 'price discovery'

I have argued elsewhere[6] that Saudi Arabia should resort to frequent (weekly) auctions of its crude on a forward basis (three to four months in advance of delivery) in order to generate price signals that would balance and influence the price signals generated on Nymex and Ice on a continuous basis. This approach would be especially effective if other major Gulf producers did the same; in this way, an auction would take place almost every day, and price signals responding to physical barrel transactions would be generated accordingly.

Price discovery is a game of equilibrium between expectations and current realities. Today, however, expectations – embodied in the price of futures – generate a much stronger signal than current realities, which are frequently unknown. We do not know how much physical oil enters into, or is withdrawn from, the market on a daily basis, nor what the change in stocks is (except for the weekly US data). Being blind to (or ill informed about) current realities, the market responds to inappropriate signals: thus, for example, information about the declining number of rigs active in the USA causes an increase of front month futures prices, even though it is not at all clear that this decline will cause a decline in production, and in any case not in a month's time! '*Another fallacy,'* Mabro again wrote in 1998 '*is to believe that withholding information, say on production, investment or stocks, improves the producer's position vis-à-vis the market. Transparency pays much higher dividends*.'[7] This calls for better and more frequent statistical information; but first and foremost it calls for producers to be seen to be active in the market, engaging in transactions that will generate the desired and needed price signals.

Mabro's proposal for price management

In September 1999, Mabro proposed that prices should be managed within a band. He wrote: '*In a market that naturally causes prices to collapse or to explode in response to either ill-informed expectations or small physical imbalances between supply and demand, production policies are unlikely to yield the desired price effect. Exporting countries, unhappy about a particular price situation, may change production volumes by too little or too much. The price target will therefore be missed. Furthermore, market's views about what production policy ought to be rather than what the policy actually is have a significant bearing on the price outcome*.'[8] It is clear today that the fine-tuning of OPEC's quotas is not an effective instrument for steering prices and for avoiding excessive fluctuations.

'THE LONG-TERM PROSPERITY OF THE INDUSTRY … REQUIRES GREATER PRICE STABILITY AND PREDICTABILITY.'

At the same time, it is also clear that we are witnessing excessive volatility. Price shifts of such magnitude have real costs in terms of: losses in the value of multiple assets, increased uncertainty, and negative impact on long-term investment decisions. The long-term prosperity of the industry, and indeed of the global economy, requires greater price stability and predictability. '*Stability does not imply fixed prices. A certain amount of flexible variations is both necessary and beneficial. What is required is a market that signals correctly the state of the current and the expected future balance of the demand for and the supply of oil. There is clearly a need for a fundamental market reform. This will require the co-operation of all the major players. We are not yet there: the understanding of the issues leaves much to be desired and the political will is very weak. Sooner or later, however, the adverse effects of excessive volatility and damaging price shocks will induce a search for remedial action*.'[9]

It is patently far-fetched to expect that some kind of international negotiation encompassing OPEC and non-OPEC exporters, and now also US shale oil producers, may reach a consensus about the stabilization of oil prices. The necessary remedial action can only come through the initiative of the leading exporter (Saudi Arabia) possibly with the support of neighbouring countries such as Kuwait

or the UAE. Others may follow in adopting the same methodology – as they have done so many times in the past. Once the market regains a credible equilibrium, the Kingdom should accept that major crude oils are traded and set the stage for such trading, in order to stabilize prices and give credibility to its signalling.

Notes

[1] 'The Oil Price Crisis of 1998', Robert Mabro, OIES Working Paper SP10, 1998, page1.
[2] *OPEC and the World Oil Market: The Genesis of the 1986 Price Crisis*, Robert Mabro (ed.), Oxford: OUP/OIES 1986, page 8.
[3] 'The Oil Price Crisis of 1998', page 17.
[4] ibid.
[5] ibid., page 2.
[6] Giacomo Luciani, 'From Price Taker to Price Maker? Saudi Arabia and the World Oil Market', in Haykel, B., Hegghammer, T., and Lacroix, S. (eds.), *Saudi Arabia in Transition: Insights on Social, Political, Economic and Religious Change*, Cambridge: Cambridge University Press, 2015, pages 71–96.
[7] 'The Oil Price Crisis of 1998', page 2.
[8] 'Managing oil prices within a band', Robert Mabro, Oxford Energy Comment, September 1999.
[9] 'Does oil price volatility matter?', Robert Mabro, OIES Monthly Comment, July 2001.

Saudi Arabia and its role in oil markets

Mark Moody-Stuart

A core element of the Oxford Energy Seminar has always been discussion on the influence which OPEC in general and Saudi Arabia in particular has had on the oil price and its environment. This is due in part to the Seminar's unique mix of attendees from both national oil companies (NOCs) and international oil companies (IOCs); Robert Mabro had always been able to ensure the attendance of eminent speakers at the Seminar from throughout the industry, selected both from former attendees and through his own formidable networking capabilities. Mabro used to remind attendees in the opening session of the Seminar that the heads of almost every major energy company, including Saudi Aramco, had attended the Seminar at some point in their careers. All had thus been exposed to the discussions on oil price and supply and demand which he would quietly steer to ensure balance.

Historical perspective on factors influencing supply and pricing of oil

Younger players could thus see the historical effects of the effective nationalization of IOC operations by OPEC countries, with the resulting flow of capital and technology to the North Sea and the Alaskan North Slope in the 1970s and 1980s and the resulting growth in non-OPEC production. They could also savour the irony that OPEC-driven price rises in the 1970s and early 1980s saved the investments in new high-cost non-OPEC developments from the economic consequences of huge cost over runs resulting from the application of untried technology and industry cost inflation. These developments drove a supply growth which caused the later price collapse. Seminar attendees would also be aware of the long period in the late 1980s and throughout the 1990s when non-OPEC production was repeatedly forecast to decline about five years out from the forecast date. Technology in the form of improved seismic imaging, deep water drilling, and horizontal wells repeatedly pushed this decline further into the future, postponing for years the expected oil price rise and the return of OPEC to dominance.

This long historical perspective puts the present rise of shale oil production in context. Once again, a period of high oil prices, with a perceived floor at the cost of marginal barrels, has fuelled the development of technology. Once again there are questions as to how long the increase in production enabled in North America by this technology can be maintained and to what extent the uniquely favourable US conditions for the development of this kind of production can be replicated in other parts of the world. How fast will the drop in oil price lead to a reduction in non-OPEC capacity? As before, I suspect that the result will surprise us. History teaches us that the oil price is notoriously difficult to forecast in the medium term, being affected by a complex interplay of estimates of supply and demand infused by a large dose of sentiment. A major influence on sentiment is an estimate of OPEC intentions and in particular the intentions of Saudi Arabia.

Saudi Arabia within OPEC – provision of reserve capacity

Saudi Arabia has long played both a leading and also a moderating role in OPEC. The wish so often expressed by Saudi Minister of Petroleum Ali Naimi has been to achieve a price acceptable to both consumers and producers – a price high enough to satisfy the reasonable needs of producers with largely oil-dependent economies and yet not so high as to choke off growth and development of the global economy and incidentally reduce the demand for energy.

'SAUDI ARABIA HAS LONG PLAYED BOTH A LEADING AND ALSO A MODERATING ROLE IN OPEC.'

The influence of Saudi Arabia within OPEC stems in part from the policy of holding a significant buffer of readily accessible production capacity. The world should be grateful to the Kingdom for this policy: a gratitude seldom expressed. During times when oil prices were peaking, the deployment of this spare capacity has had a moderating effect. Saudi Aramco has argued that the cost of holding this capacity is offset by the income gained when the capacity is used at times of very high prices. Be that as it may, and one might question whether the computation truly reflects the economic cost, it is certainly true that no purely commercial organization would sometimes hold more than 2 million barrels a day (b/d) (some 20 per cent of total capacity) in reserve without payment of a significant capacity fee, such as that seen in The Netherlands for the Groningen gas field or in several countries in the utility industry.

Saudi Aramco contrasted with other OPEC state oil companies

Saudi Arabia's unequalled combination of large production volume and spare capacity policy is by no means the only factor underpinning its leading position in OPEC. The unique position of Saudi Aramco as a truly leading global company in technology and efficiency must be a source of admiration and some envy among other OPEC (and non OPEC) nations and NOCs. Almost without exception, other OPEC state oil companies have been used by their governments as sources of funds and subsidies, starving them of the capital needed for development of production, as well as of people and technology. In the worst cases, such as PDVSA and NIOC, this leads to flattening or declining production and even to a downwards spiral from which it is difficult and time consuming to recover.

Saudi Aramco's unique position is no accident. Successive rulers and governments of the Kingdom, assisted by the leadership of Aramco, have ensured that Saudi Aramco has been largely defended from depredations and demands of other elements of the state. Aramco has thus developed world-class standards of employment and efficiency, with a remarkable corporate ethos of meritocracy, work ethic, and standards of integrity. This enables Aramco to attract and retain the very best Saudi engineers and earth scientists, and to employ global systems of finance.

'SAUDI ARAMCO'S UNIQUE POSITION IS NO ACCIDENT.'

The company's approach to production has been equally farsighted, with an emphasis on maximizing ultimate recovery from every accumulation rather than short-term DCF calculations. Aramco regularly discovers and books, using audited international definitions, more reserves than it produces. It has probably the most sophisticated reservoir models in the world, allowing it to optimize recovery and track the production of major fields. There has long been a policy of open cooperation with the major global oilfield service companies, most of whom have joint research facilities in the Kingdom.

Technology development is not limited to the conventional oil and gas fields. Saudi Aramco has a major programme looking at production of shale oil and shale gas, as well as programmes for replacing fossil fuel-generated electricity with solar photovoltaics, and for solar thermal programmes to be used in the generation of steam for power, process, and tertiary production, in order to conserve hydrocarbon resources.

Importance of Saudi conventional production

Historically, Aramco rapidly adopted and adapted the technological advances made by western international companies when stimulated by their loss of major production in the Middle East. Apart from its own considerable (and successful) research and development efforts, it would appear that Aramco is also internalizing, and adapting rapidly to Saudi conditions, technological developments in alternative energy and shale production from elsewhere in the world. However, such efforts need to be put into perspective. While development of the Bakken, Eagle Ford, and Permian shales in the USA has resulted in some 3 to 4 million b/d of oil from shale, continuous drilling by some 200 rigs and the mobilization of very large fleets of fracking trucks is required to maintain this production. For comparison, in the last six years, Saudi Aramco has developed three completely new conventional fields (Shaybah, Khurais, and Manifa) each of which will produce a million barrels a day at a fraction of the production cost of US shale. Such developments are major achievements; there have been no similar developments elsewhere,

although some are being planned in Iraq. This suggests that the power of Saudi conventional production is far from being a spent force.

'… THE POWER OF SAUDI CONVENTIONAL PRODUCTION IS FAR FROM BEING A SPENT FORCE.'

Price, security of supply, and relationships with customers

Whereas consuming countries and IOCs worry about security of energy supply, the habitual Saudi concern has been to ensure relationships with reliable customers and security of offtake. This security of offtake has been achieved by building long-term relationships with companies with access to major consumer networks as well as by building selective stakes in consuming country refineries linked to agreements covering a larger percentage of the crude intake of that refinery. These agreements and relationships are strictly at market prices; customers have come to rely on the price being adjusted, retrospectively if required, to be in line with the market. Thus, in times of low oil prices with producers competing for market share, Aramco can be assured of maintaining offtake volumes at competitive prices, whatever the market might determine that to be. This solid market access, built strategically over many years, is also part of the Saudi influence on OPEC.

Saudi Arabia has also gradually switched more of its supply to the growing markets of the east, where higher prices can also be achieved. This far-sighted strategy long predates the growing domestic production in the USA. However, in spite of recent decreases in prices in that market, Saudi Arabia has maintained a level of supply to the USA for what would appear to be strategic, rather than short-term commercial, reasons. The thinking behind this strategy (a switch to the east) is evidenced by the number of Saudi students sponsored to study engineering and other subjects in the top universities of China, Japan, and Korea. For example, there are now some 30 Saudis in Aramco who were educated in Korean universities and who speak Korean fluently. None of the majors has practised such a far-sighted strategy of relationship-building with key countries, not even within the countries of the Middle East.

Challenge of Saudi Arabia's expanding domestic market

So what could affect this overall Saudi position? The immediate threat is that of uncontrolled domestic energy consumption in the Kingdom, driven by subsidized fuel, electricity, and water prices. Saudi Aramco itself repeatedly draws attention to this threat, pointing out that if the current demand (domestic oil and gas consumption of some 4.5 million b/d oil equivalent) continues to grow at 7 or 8 per cent a year, it will double by 2024. This is manifestly unsustainable. Saudi Aramco plays a leading role in efforts to make power generation and energy usage more efficient and in the introduction of efficiency mandates for road transport.

'THE IMMEDIATE THREAT IS THAT OF UNCONTROLLED DOMESTIC ENERGY CONSUMPTION IN THE KINGDOM.'

The real solution has to lie in the removal, or significant reduction, of subsidies. The problem with these subsidies is not just their growing cost to government – diverting funds which could be spent in a directed way to achieve social or strategic aims. The growing energy requirement necessitates the investment of very large sums, which are used to develop associated gas fields from which the gas is sold well below production cost. Saudi capital and project management resources are diverted from other projects which could contribute positively to the national economy. Some argue that the low energy and transportation costs have side benefits, but they contribute to the growth of an artificial economy built on uncompetitive use of energy and fictitious profitability.

This problem exists to a greater or lesser extent in all Gulf economies, and in many other countries with hydrocarbon production. Cross-border differences lead to smuggling and encourage the development of other forms of corruption. The solution will need, to some extent, to be collective, but bold action is required in each country. There may need to be cash transfer payments of some sort to the average family, based on reasonable usage, to cushion the effect of price rises and avoid social tensions. Each family will then face a simple choice: should they reduce usage by simple efficiency measures and spend the gradually reducing transfer payment on something else? Or do they continue to use energy which rises in cost as the subsidy is removed? It is probable that such a financial incentive would drive a rapid change of behaviour, greatly benefitting both the economy and future government revenues.

Potential consequences of failure to control demand

Without a programme to address this issue, over the next few years the reduction in government revenue caused by the uncontrolled rise of domestic energy consumption will make the subsidies unaffordable. The danger is that this would then lead to unpleasant and unintended consequences, as seen in other countries, for example:

- Unplanned rises in the price of domestic energy or a reduction in other generous social programmes could put stress on social cohesion.
- Attempts could be made to burden Aramco with executing what are essentially social programmes, in an effort to preserve social cohesion.
- The government could attempt to extract more revenue from oil and gas production, reducing the investment capacity of Saudi Aramco and gradually weakening a company which is not only a proud national example of efficiency and effectiveness but the major source of national revenue. This unfortunately has been the common fate of NOCs elsewhere is the world where economies have come under strain and governments have taken a short-sighted route to addressing underlying problems.

Such unfortunate developments would affect not only Saudi Arabia, but other countries in the region. Saudi Arabia would probably lose influence in OPEC. The world as a whole would suffer from the loss of a rational and stabilizing voice in the energy market. The result would undoubtedly be greater volatility and impacts on global economic growth.

Mabro often told a joke in the way that only he could, with appropriate gestures and convincing expressions. It involved an Egyptian farmer who was asked by his neighbour to look after 12 sheep while the neighbour travelled. On the neighbour's return, there appeared to be one sheep missing. Repeated counts of the moving flock could not resolve the difference. In the end the police were called and it was agreed that 12 policemen would each catch and hold a sheep. Sure enough, one policeman found that there was no sheep to hold. Confronted with this glaring evidence of the shortfall, the farmer declared that it was not his fault that that policeman had been so slow that he could not catch one of the sheep. This story makes the point that we are all sometimes reluctant to accept the consequences of something which we know logically to be true and to require action. This is more likely to be the case when the response required will affect millions of people and involve some disruption of the currently accepted status – while the situation is not yet too uncomfortable and so action can be deferred for a little.

Not just for the sake of Saudi Arabia and the example that Saudi Arabia and Saudi Aramco have set within OPEC, but also for the potential impact on global energy supply, let us hope that a swift solution can be found to the challenge of subsidies.

Déjà vu all over again: another oil price fiasco

Nordine Ait-Laoussine and John Gault

OPEC: market share versus target price

It appears to us that the current oil market situation has a familiar and disheartening ring. In September 1986, we presented an analysis to the Oxford Energy Seminar in which we estimated the high cost of a decision taken by OPEC to pursue market share rather than defend a target price. This analysis later appeared in a book, *The Oil Price Crisis*,[1] edited by Robert Mabro. (Quotations in this article are taken from this book.) In November 2014, OPEC oil ministers again faced a similar choice: defend the oil price, which had been declining since June, or defend the OPEC market share, which had been threatened by soaring non-OPEC oil production for several years. No one believed the ministers could do both simultaneously.

Many outside observers and analysts (including ourselves) expected OPEC to pursue a price defence strategy by reducing its ceiling of 30 million b/d (in place since 2011). A cut to something nearer to 28.4 million b/d, OPEC's own projected global requirement for OPEC crude oil in 1Q15, was a reasonable expectation

'MANY WERE SURPRISED THAT OPEC CHOSE TO LEAVE ITS CEILING UNCHANGED.'

By the week of the November meeting, the average price of the OPEC Basket of crude oils had already declined to about US$75/bbl, from US$108/bbl in June. A temporary cut in the ceiling to 28.4 million b/d should have been sufficient to reverse the price slide. Many were surprised that OPEC chose to leave its ceiling unchanged.

Long-run cost to OPEC of market share defence

Why the meeting made the costly choice to defend market share rather than price is an important question to which we will return later. Meanwhile, we have estimated that the long-run cost to OPEC of its decision ranges from US$343 bn to as high as US$746 bn over the period to 2020,

Table 1 High

		The 2015–20 overall balance											
		Price defence strategy						Market share strategy					
		2015	*2016*	*2017*	*2018*	*2019*	*2020*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*
Net demand on OPEC crude	mb/d	29.5	28.5	28.2	28.5	28.7	29.0	29.4	29.9	30.5	31.0	31.6	32.1
OPEC local consumption	mb/d	9.7	9.8	9.9	10.1	10.2	10.3	9.7	9.8	9.9	10.1	10.2	10.3
OPEC exports	mm/d	19.8	18.7	18.3	18.4	18.5	18.7	19.7	20.1	20.6	20.9	21.4	21.8
Average price	US$/bbl	100	100	100	100	100	100	55	62	67	70	71	73
OPEC revenue	US$ bn	723	683	668	672	675	683	395	455	504	534	555	581
Cumulative export revenue													
Price defence strategy	US$bn	3420											
Market share strategy	US$bn	2443											
Cost of market share strategy													
Undiscounted	US$bn	977											
Discounted at 12%	US$bn	746											

depending upon one's assumptions about how a price defence strategy, had it been adopted, would have been implemented. Our higher long-run cost estimate (Table 1) assumes that a price defence strategy would have cut the OPEC ceiling sufficiently to push the OPEC Basket (reference) price back to US$100/bbl on average (in nominal terms) for each year 2015–20. OPEC would, in this scenario, have had to adjust its ceiling to equal the projected call on OPEC crude for the next few years.

Our lower estimate (Table 2) assumes that the same cut in the OPEC ceiling would face greater headwinds and would have been able only to stabilize the price slide at US$75/bbl on average for 2015, and to bring the price gradually back to US$100/bbl by 2020. There are many reasons why this slower price recovery is plausible, such as weak OPEC credibility due to past failure to enforce ceilings, unanticipated adjustments of supply and demand data, drawdowns of already high global inventories accumulated over recent years, or unresolved disagreements among member countries on the new price target.

In both our high and low estimates:

- We assumed the call on OPEC crude oil over the remainder of the decade under the price defence strategy would follow the trajectory foreseen in the OPEC Secretariat's World Oil Outlook Reference Case, which assumed an OPEC Basket price of US$110/bbl in nominal terms throughout the 2015–20 period.[2]

Table 2 Low

		The 2015–20 overall balance											
		Price defence strategy						Market share strategy					
		2015	*2016*	*2017*	*2018*	*2019*	*2020*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*
Net demand on OPEC crude	mb/d	29.5	28.5	28.2	28.5	28.7	29.0	29.4	29.9	30.5	31.0	31.6	32.1
OPEC local consumption	mb/d	9.7	9.8	9.9	10.1	10.2	10.3	9.7	9.8	9.9	10.1	10.2	10.3
OPEC exports	mm/d	19.8	18.7	18.3	18.4	18.5	18.7	19.7	20.1	20.6	20.9	21.4	21.8
Average price	US$/bbl	75	80	85	90	95	100	55	62	67	70	71	73
OPEC revenue	US$ bn	542	546	568	604	641	683	395	455	504	534	555	581
Cumulative export revenue													
Price defence strategy	US$bn	2902											
Market share strategy	US$bn	2443											
Cost of market share strategy													
Undiscounted	US$bn	459											
Discounted at 12%	US$bn	343											

- We compared OPEC's projected revenue under the price defence strategy with its projected revenue under the ongoing market share strategy. The impact of the market share strategy on OPEC's revenue is reflected in a recent IEA report,[3] which assumes a much lower trajectory of oil prices. This report confirmed our own views on the very limited impact of lower prices on global oil demand and a delayed impact on non-OPEC supply growth.
- We adopted OPEC's own projection of domestic oil consumption in member countries[4] (the IEA report referred to above makes no equivalent projection).
- We then calculated the difference in OPEC's projected revenue from petroleum exports under the price defence strategy compared with its projected revenue under the market share strategy, and discounted the difference at 12 per cent. Our estimates ignore revenue losses attributable to natural gas and NGL exports.

These hypothetical price defence scenarios illustrate that a relatively small, credible cut in OPEC output (averaging less than 5 per cent below the current 30 million b/d ceiling on average over the 2015–20 period) would have been sufficient to avoid the much larger (16–29 per cent) loss of revenue now foreseen under the market share strategy.

All of our calculations of OPEC's comparative loss due to the adoption of the defence of market share strategy treat OPEC as a unit. The loss calculated here is collective, and all member countries bear part of this burden.

How did OPEC make this choice, and what could OPEC do now?

The decision last November to defend market share was practically imposed by Saudi Arabia who:

- doubted the willingness of other OPEC members to abide by any agreed production cut, and
- despaired of persuading non-OPEC producers, such as Russia and Mexico, to collaborate on a price defence strategy.

Saudi Arabia feared that they alone would bear the entire burden of a price defence strategy, while the benefits would accrue to others.

'THE DECISION LAST NOVEMBER TO DEFEND MARKET SHARE WAS PRACTICALLY IMPOSED BY SAUDI ARABIA …'

The November 2014 decision has yielded a market situation that is far from stable. If OPEC continues producing at present levels, exceeding the global call on OPEC crude oil, further price drops are likely. Some OPEC members such as Iraq (and Iran if sanctions are lifted) will expand output, while global inventories will swell, enhancing price weakness and volatility. OPEC has abandoned its primary *raison d'être*, namely price stabilization, thus damaging the organization's long-term credibility.

Today's challenge compared with 1986

The challenge facing OPEC is even greater today than it was in 1986, when petroleum derivatives markets were still in their infancy. Today, the volumes of 'paper' oil traded on the principal futures exchanges vastly outweigh volumes traded physically. Financial investors now play an enormous role in oil price formation and their expectations (which govern the magnitude of their holdings of futures contracts and other derivatives) can fluctuate rapidly; this happened last summer, contributing to the price decline. In the absence of a credible OPEC price signal, price volatility will only be exacerbated.

Another way in which the challenge facing OPEC today is greater than that in 1986 is that the mantle of 'pioneer in asserting sovereignty over natural resources by developing countries', which OPEC wore proudly during its first three decades, has worn thin. The opportunity to achieve a higher standard of living thanks to enhanced export revenues has clearly been squandered by some OPEC members, while numerous oil-importing developing countries have outdistanced some OPEC members in many measures of citizens' welfare. Some global observers who once viewed OPEC sympathetically as a champion of the rights of former colonies now see the organization as being composed of super-rich 'winners' and left-behind 'losers'. The present strategy split within OPEC does nothing to dispel this perception.

Potential fiscal response by governments of oil importing countries

Compounding the challenge to OPEC is the likelihood that the governments of oil-importing countries will seize the opportunity afforded by lower oil prices to increase excise taxes or diminish subsidies. Many governments need to expand revenue to balance budgets, while some will also employ taxes on petroleum products to discourage consumption and reach emissions targets. Other governments, urged by the IEA and IMF, will reduce or eliminate subsidies to end users of petroleum products. Such modifications of end-user price regimes are most easily implemented when consumers perceive prices to be relatively low.

In *The 1986 Oil Price Crisis* Mabro correctly anticipated such developments following the 1986 oil price collapse. OPEC members will end up with an even smaller percentage of the end-user value of their principal export than they received prior to

'… URGENT THAT OPEC RECONSIDER ITS CURRENT STRATEGY AND ADOPT A PLAN THAT WOULD REVERSE THE FORESEEABLE REVENUE LOSS.'

adopting the market share strategy – and this will be a permanent shift.

Possible future courses of action

For all of these reasons, it would appear urgent that OPEC reconsider its current strategy and adopt a plan that would reverse the foreseeable revenue loss. How could this come about?

- The initiative for such a change must come from OPEC members other than Saudi Arabia. Saudi Arabia has shown no inclination so far to review the strategy adopted last November, and indeed is expressing an unrealistic confidence that oil prices have stabilized and global oil demand growth is accelerating.
- The initiative must convince Saudi Arabia (and the rest of the world, including financial investors) that other OPEC members are willing to abide by agreed production cuts. This will be difficult given that non-GCC OPEC members have, in the past, tended to produce at their respective capacities, regardless of OPEC agreements. Temporary self-restraint will be required, particularly from Iran and Iraq, both of whom view themselves as having special historical rights to expand output.
- The initiative should be open to participation by non-OPEC oil exporting countries, but should not be contingent on, or even be hopeful of, such cooperation. Non-OPEC countries have never contributed significantly to OPEC price or revenue stabilization efforts in the past.
- The initiative will lack credibility unless the non-GCC OPEC members have already agreed, before approaching their GCC partners, on how to allocate their share of potential production cuts among themselves.
- Saudi Arabia may welcome the initiative more than recent Saudi statements would suggest. The Kingdom continues to find OPEC useful; otherwise it could have left the organization long ago. The Kingdom has not flooded the market with its own exports, driving prices even lower in a competitive effort to expand market share. The Kingdom clearly understands and appreciates the potential benefits of cooperation.

While circumstances today are in many ways different from those surrounding the 1986 oil price war, what Mabro wrote then remains applicable today: '*The conclusions of this analysis are that a low oil price strategy is likely to prove costly for OPEC in the medium term, and that such a strategy is totally irrational for non-OPEC exporting countries, particularly for those belonging to the Third World*.'

Our own 1986 conclusion was similar, and deserves to be reemphasized: '*We believe that* [OPEC] *should have never expressed its objective in terms of market share only but rather in terms of overall revenues. As we have seen, the losses already incurred, and those to follow in the future, exceed any imaginable production sacrifice that OPEC would have had to make to defend the price prevailing on the eve of the war*.'

Notes

[1] *The 1986 Oil Price Crisis: Economic Effects and Policy Responses, Proceedings of the Eighth Oxford Energy Seminar September 1986*, Robert Mabro (ed.), Oxford: OUP/OIES, 1988.
[2] *World Oil Outlook*, OPEC, 6 November 2014, page 32.
[3] *Medium-Term Oil Market Report 2015*, International Energy Agency, February 2015, page 12.
[4] *World Oil Outlook*, op. cit., page 71.

Saudi Arabia's complex relationship to the oil market: 1985 and 2015

Pedro Haas

In September 1985, during the Oxford Energy Seminar, the Final Panel assembled its usual set of luminaries (Ministers and CEOs of oil companies), but on this occasion it also included Sheikh Ahmed Zaki Yamani, the longstanding Minister of Petroleum and Mineral Resources of Saudi Arabia. The fact that Yamani had shown up for the Final Panel was not necessarily remarkable, as Robert Mabro had an unusual capacity to draw the top names in the industry to the events he organized, especially the Seminar. This year, however, the fact that Yamani, easily the most powerful and highest profile of all the OPEC Ministers, was attending had a special significance: after the price peaks of the post-1979/80 crisis, the oil market was softening and OPEC seemed powerless to arrest the slide. The presence of Yamani was a unique opportunity to hear what the Kingdom

had in mind at this critical juncture. Yamani did not disappoint.

Ministers and their style

Yamani is an imposing man, with a sharp intellect and impeccable manners, who clearly relished the high-profile role he played in the international petroleum industry. He had become minister in 1962, at the age of 32, at a time when OPEC was a low-profile club of oil-producing countries which rarely attracted media attention. A lawyer by training (King Fouad University, NYU, Harvard), Yamani was a perfect fit for the growing clout of Saudi Arabia among oil producers, oil companies, oil-consuming countries, and international markets at large.

Yamani had succeeded Abdullah Tariki, who had himself obtained a degree in chemistry and geology from Cairo University and a master's degree in petroleum engineering and geology from the University of Texas. Tariki was the first Minister of Petroleum of Saudi Arabia, a ministry which had been founded in December 1960, right after the creation of OPEC in September 1960. Tariki had worked with Juan Pablo Perez Alfonso, the Venezuelan Minister of Mines, to create OPEC. He was especially critical of Aramco (the joint venture between Exxon, Chevron, Texaco, and Mobil – to give them their more contemporary names) and defended the right of Saudi Arabia to not only obtain a higher percentage of the economic rent accruing from oil production, but also to have a greater say in Saudi oil industry decision-making. Tariki was considered confrontational by the oil industry (especially by the large US oil companies that comprised Aramco) and probably by the US government as well. He also got involved in internal Saudi royal family politics, which eventually got him sacked as oil minister and as an Aramco board member.

The similarities and the differences between Tariki and Yamani reveal much about the changing role of the Saudi oil minister and the direction of Saudi oil policy itself. Both men were partly educated in Western universities and had done their share of legwork in the oil industry. One could say that they were both considered oil industry-knowledgeable when they were appointed. Tariki was 40 years old when he became minister, Yamani 32. But the differences between the two are particularly enlightening: while Tariki's style was direct, outspoken, and confrontational, Yamani was a consummate diplomat, rarely losing his temper, and always trying to achieve his goals in ways that others would not find offensive (although that changed somewhat over time). Furthermore, Tariki took sides in one of the many Saudi Royal family feuds; one could question whether his mistake had been to back the losing Prince, or whether it was his involvement in Royal family politics itself which had been the mistake. The Saudi Royal family has always been careful to appoint non-family members as oil ministers (their only allegiance is to the head of state and they can more easily be sacked) and ministers normally steer clear of family politics (at least ostensibly).

'THE MORE POWERFUL THE COUNTRY AND THE STRONGER ITS OIL POLICY, THE MORE SUBTLE THE WIELDING OF THAT POWER HAD TO BECOME.'

One can argue that Tariki was an essential component of Saudi Arabia's early break from its oil childhood: founding and joining OPEC was a first step towards recognizing publicly that the interests of the nation and those of the companies were not necessarily aligned – or at least were not always aligned. But one can also argue that Yamani was the right man for the next step of Saudi Arabia's oil policy assertiveness: the more powerful the country and the stronger its oil policy, the more subtle the wielding of that power had to become. As Sylvan Robinson of Shell once put it: '*The tougher the words, the sweeter the music has to be*.'

The current oil minister, Ali al-Naimi, was born in 1935. He was an Aramco 'lifer' – having studied geology in the USA (BS at Lehigh University, MS at Stanford) he became the first Saudi president of Aramco in 1983. After being in that position for 12 years, he became Minister of Petroleum and Mines in 1995 and has held the job ever since. Naimi is deeply knowledgeable about the oil industry, from the nuts and bolts of exploration and production to the subtleties of oil policy. He is a thoughtful and polite man, unassuming to a fault, the perfect sherpa to his King. Unlike Yamani, Naimi does not relish the limelight and only uses the high profile naturally accruing to a Saudi oil minister when it suits the policy purpose he is pursuing. If there have been policy debates and discrepancies within the Saudi political hierarchy during his tenure as minister – and there must have been a few – they have never come to light through his statements.

Although it clearly would be a stretch to pretend that the succession of Saudi heads of state had perfect foresight when they appointed their successive oil ministers, there is a certain pattern in the sequence of Tariki, Yamani, Nazer, and Naimi (Nazer may be the exception, up to a point). The degree of professionalization has deepened, as has the self-control of the ministers and the policy itself. Much as a central banker exerts influence over financial markets in subtle (using one word instead of another, like the US Federal Reserve currently agonizing over the word 'patience') and not so subtle (by changing the interest rate unexpectedly) ways, Saudi Arabia has

accumulated a wealth of experience about how to interface with the oil market. In the meantime, Aramco has become Saudi Aramco and the top echelons of the company (down to a pretty significant level) are occupied by competent and self-confident Saudis.

Policy continuities and discontinuities

Every student of macroeconomics 101 is taught how difficult economic policy is because the policy objectives (such as: employment, trade, income distribution, growth, industrialization, and regional development) are many, while the instruments (essentially monetary and fiscal policy, although nowadays regulation should also be counted) are few. In the case of Saudi Arabia, the number of policy objectives is very broad: foreign policy, defence, urbanization, employment, industrialization, agriculture, religious affairs, energy, social development, Royal family affairs, and more. These are all to be addressed through the lever of a single policy instrument: oil production.

The only way in which Saudi Arabia can use oil production as a policy instrument is by having the ability to ramp production up or down from a large base. This has led to Aramco keeping anywhere between 2.5 and 3.0 million b/d of unused oil production capacity (more at times, but generally unwillingly). The political importance of maintaining this available capacity is revealed by the significant cost entailed by investing and maintaining the capacity: one does not maintain idle oil production capacity unless there is a very compelling reason to do so. A complement to this unused capacity is the accumulation of monetary reserves: Saudi Arabia is said to currently possess about US$750 billion in reserves, an essential element of their current oil policy (to which we will return).

But Saudi Arabia has a problem: it is the single largest oil player in the international oil market. The scale of its production and its exports means that it can push the markets in one direction or another, but it also means that it has to be careful to avoid being actually seen doing so. The answer to this is OPEC. As Yamani once explained, OPEC is to Saudi Arabia what the UN, the IMF, and the World Bank were to the USA just after World War II: a screen behind which one could attempt to shade the raw power of the leading country. During meetings of the OPEC Conference, Saudi ministers are invariably polite and listen attentively to the utterances of their colleagues from countries which produce comparatively small volumes of oil, or which have no spare capacity, and thus no policy flexibility or influence. In the end, however, Saudi Arabia generally gets its way because the smaller players know that pushing the Saudis too hard (as in 1985–6) ends up damaging the weaker players more than the stronger ones, and none less than the strongest one, Saudi Arabia. The exceptions to this rule are the Iraqis (a special case since the Desert Storm campaign) and the Iranians (a damaged but powerful regional contender).

'BUT SAUDI ARABIA HAS A PROBLEM: IT IS THE SINGLE LARGEST OIL PLAYER IN THE INTERNATIONAL OIL MARKET.'

Saudi Arabia also knows, rightly or not, that the oil price is also seen as a key factor in the general economic welfare of the entire world, especially of the OECD countries. It can impact GDP growth (through the equivalent of a tax hike or rebate, as the case may be, plus the recycling of petro-dollars) and inflation rates (through retail fuel prices, although these are influenced as much by local fuel taxes or subsidies as by the international oil price). The oil share of total energy consumption today stands at about 30 per cent (with gas at 25 per cent in round numbers); OPEC's share of global oil demand is about 30 per cent and Saudi Arabia's share of OPEC production is about 30 per cent. Because of its size, Saudi Arabia knows that its economic welfare is tied to the growth of the world economy, to the share of oil in primary energy consumption, and to the OPEC share of global oil demand, as long as its own share of OPEC production remains more or less unchanged. While a smaller oil producer may believe that it can avoid the crush of macro trends, Saudi Arabia knows that it cannot. This means that in pursuing its national interest it must take into account the impact of its policies on the larger economic climate.

'ITS ECONOMY IS ALSO INEXORABLY TIED TO OIL, WHICH REPRESENTS 45 PER CENT OF ITS GDP.'

Unlike many other oil producing countries (including several OPEC members) Saudi Arabia has very large reserves of oil, probably significantly upwards of 300 billion barrels. Its economy is also inexorably tied to oil, which represents 45 per cent of its GDP, 80 per cent of its budget, and 90 per cent of its exports. Saudi Arabia thus wishes to extend the global economic use of oil for as long as possible, while maintaining an oil price that can satisfy the economic requirements of the nation (a nation that collects practically no taxes from private citizens or companies). These two imperatives can sometimes (like today) be very hard to harmonize.

Finally, Saudi Arabia is a close ally of the USA. This arrangement has been in place since the famous meeting between King Saud and President Roosevelt. Notwithstanding the natural ebbs and flows of such a relationship, the mutual security interest is riddled with complexities, but it still remains the bedrock of Saudi foreign policy.

1985 and 2015: what 30 years of experience can do to a policy

In September 1985, Mabro introduced his guests on the Final Panel as he usually does: respectfully, but with a dose of humour and a degree of lightness. Final Panel guests are all big movers and shakers, with sizeable egos and big claws to match. Mabro needed their continuing support for the Institute and the Seminar, but he would also generally do as much as he could to prevent his exalted guests from lapsing into making banal statements, country or company advertisements (or, even worse, self-advertisements, of which there were very few, to tell the truth).

Yamani stood up and quickly made the point that Saudi Arabia had tried to balance the market and hold prices steady by proposing that OPEC cut back its production, but it had had no success (Saudi Arabia had maintained its official selling prices while its OPEC colleagues did not and Saudi exports and production had collapsed – Saudi produced 10 million b/d in 1980 and 3.4 million b/d in 1985). He explained that Saudi Arabia was being forced to abandon its official price policy and essentially join the netback bandwagon: pricing crude oil relative to its refined products realization, thus guaranteeing refiners' margins and ensuring that Saudi exports volumes would remain competitive. Yamani was telling (OPEC and non-OPEC) producers: since we can't convince you to manage the market by cutting production back, we are going to join you. The rest is history: prices proceeded to crash into single digits as the natural arbitrage that governs the crude-to-products relationship disappeared, due to the guaranteed refining margin. The refiners' normal incentive to run their facilities up to the point where the refining margin equalled zero gave way to an alternative incentive to maximize volume. Yamani's simple, straightforward explanation was so clear, direct, and unvarnished that it was not immediately understood by all, or at least its consequences were not. Mabro himself, on the other hand, was entirely clear: the Saudis had reached the end of the road and could not hold the fort any longer by themselves, which meant that the price softening would quickly become a rout. And it did.

'MABRO WAS ENTIRELY CLEAR: THE SAUDIS HAD REACHED THE END OF THE ROAD … WHICH MEANT PRICE SOFTENING WOULD QUICKLY BECOME A ROUT.'

Fast forward 30 years and one finds coincidences and differences between the two situations: just when the market was getting used to prices of US$100/bbl or higher, the inexorable global rise in oil consumption led by China slowed, while the cost curve of oil production changed (as a result of the shale oil phenomenon in North America). Between the low-cost reserves of the Middle East and the high-cost reserves in ultra-deepwater or the Arctic, billions of barrels of shale oil suddenly became economic, aided by high oil prices and technical progress. Furthermore, US$100 oil depresses consumption of oil versus other sources of energy and incentivizes the substitution of capital for energy, thus accelerating energy productivity growth, while generally diminishing the share of oil in the energy matrix, the share of OPEC oil, and inevitably – sooner or later – the share of Saudi Arabia in OPEC's production. Saudi Arabia clearly has conflicting interests; one can only imagine that these have led to internal policy debates:

- maximize the price and trim production (some argue that this optimizes the cash gain over time, since the volume sacrifice is lower than the price sacrifice),
- or maintain market share and let the price of oil adjust downwards?

Much as domestic political imperatives require increased spending by the Saudi state, and thus a high price of oil, the requirements of such a policy are clear: Saudi Aramco would need to cut production back by 1.5 to 2.0 million b/d for a period. This might maintain the price level around US$100, but it would entail the possibility of Saudi Arabia finding itself in a quasi-repeat of the 1985 situation: cutting back its own production in order to (unwittingly, but surely) protect expensive oil production, oil substitution, and energy saving. Yamani had tried this policy, only to find that it depleted Saudi foreign currency reserves and shrank its oil production, to the point where the only way out was a policy that led to the destruction of the oil price. In the summer of 1986, the situation was resolved by Iran reaching out to the Saudi government in search of an orchestrated production cut. It is not a stretch to imagine that Saudi thinking in 2014/15 is running along similar lines: if OPEC (together with some non-OPEC countries) cannot be mobilized to trim production back, then Saudi Arabia by itself cannot and will not do it by cutting its own production. On the contrary, biting the bullet and accepting the consequence of OPEC's inability to coalesce around a new volume and price policy may be the best course of action for Saudi Arabia, especially at a time when its foreign currency reserves are high and a period of relatively low prices can be withstood by the Kingdom. The complexity in this case is that no one – including the Saudis – really knows where the new equilibrium will be.

Will the new price equilibrium gravitate around US$50/bbl, US$70/bbl, US$80/bbl? And just as importantly, how long will this equilibrium last before prices naturally climb back towards the US$100/bbl level again? On the other hand, will oil prices ever reach that level again? If it is Saudi

policy to ensure that its reserves get produced at a reasonable rate (around 9 to 10 million b/d, let's say), can that happen without accepting a permanent ceiling on the oil price? And where should that ceiling be set? What has changed in the 30 years since 1985? Is Saudi policy essentially responding – just as it did then – to a potential loss of OPEC production quota, or is the problem apparently similar but fundamentally different?

The differences are not hard to detect: shale oil is one, followed by cheap gas in North America and a growing share of gas in the energy matrix, a higher degree of attention paid to environmental issues, and a disappearance of oil uses other than those associated with transportation fuels, gasoline and diesel. Technology and a high oil price have also made energy productivity a more attractive proposition. It shouldn't stretch the imagination to believe that the Saudis would consider every one of these issues as a threat to the long-term productive use of their extensive reserves. The US$100/bbl (and higher) oil price also gave rise to an overheated market in oil services and capital goods: semi-submersible rigs reached US$650,000 per day and are now quoted below US$300,000 per day. Saudi production discipline essentially resulted in cost inflation and a transfer of rent from the oil producers to the service and engineering companies.

But all these differences between the situation 30 years ago and now cannot obscure the fact that current Saudi oil policy, more sophisticated and better articulated as it may have become, shares its DNA with the Saudi oil policy of the 1980s: it is based on a deep understanding of the need to preserve the role of oil and the corresponding Saudi production volumes. To that continuity the Saudis have added the weight of experience, which dictates that if bullets are going to be bitten, they should be bitten early rather than late.

'… RESULT IN OPEC MEMBERS' ACCEPTANCE OF A NEW NORMAL – PRODUCING A SMALLER VOLUME AT A LOWER PRICE POINT.'

In addition to straightening out the oil production cost curve (goodbye Arctic, ultra-deepwater gas, marginal tar sands, and marginal shale), the Saudi policy (or the absence of one, in consonance with OPEC's refusal to cut production) will also eventually result in OPEC members' acceptance of a new normal – producing a smaller volume at a lower price point. Indeed, what would have been unacceptable to most OPEC members a few months ago (namely the recognition that an oil price in the neighbourhood of US$70/bbl, let's say, is essential to the preservation of oil's share of primary energy) will now be seen by most, if not all, members as a pretty good deal in comparison with the current level of prices.

Future Ministers

There is a new King in Saudi Arabia, and a new generation of Princes is getting closer to exercising power. Ali Naimi will probably be replaced at some point relatively soon. One can only hope that the experience the Saudi government has accumulated regarding oil policy will result in his replacement being yet another experienced civil servant with deep experience and self control. The challenges facing the oil commodity over the next few years (gas, renewables, energy productivity) will be matched by the challenges facing Saudi Arabia's oil policy. A very steady pair of hands will be needed to steer the main player in the global oil market.

The political economy of oil and economic diversification: a neglected research field Robert Mabro would certainly like us to revive

Ali Aissaoui

Between 1993 and 2001 Robert Mabro, in his capacity as Director of the Oxford Institute for Energy Studies, presided over the publication of a series of books on the political economy of oil (the series includes, in publication order, Venezuela,[1] Nigeria,[2] Indonesia,[3] Libya,[4] and Algeria[5]). In a way, this initiative was in step with the prevailing renewed research trend. The emphasis was on the role of oil in shaping the political, economic, and social dynamics affecting the major oil-exporting countries of the developing world. However, while most relevant publications of that period were of a broad thematic nature, this series focused on the oil and gas industry of individual countries in the context of history, political economy, and international relations. As far as I am aware, the rationale for the book series was twofold – the obvious one being to make a contribution towards filling a research gap in the field. Given the countries' importance to the world's oil (and increasingly gas) markets,

deeper insight was needed to form a better understanding of their policies and institutional constraints. The less obvious reason is that multiple country case studies can help reflect the diversity of contexts and conditions and draw on distinct sources of evidence to discern national idiosyncrasies.

To be sure, Mabro appreciated and acknowledged the quality of the research work the authors carried out (otherwise he would not have allowed its publication). However, I remember from my experience of interactions with him, as the author of the last book in the series, that he expressed concern about some weaknesses in the analyses of the relation between oil and economic development – or the illusion of development as we perceived it. In particular, he regretted the lack of interest in the countries' '*efforts to diversify their economies'* despite this being explicitly mentioned in the description of the series. Indeed, a brief look at the books' indexes reveals that neither my former colleagues nor I actually said much on the theme. My justification, in the case of Algeria, was that economic diversification was not an explicit objective of government policies at that time.

'MABRO WAS OFTEN AHEAD ON NEW POLICY IDEAS. HE FIRST CONSIDERED THE CONCEPT OF ECONOMIC DIVERSIFICATION IN THE LATE 1960s …'

This explanation could plausibly extend to the four other country case studies. Indeed, at that time the concept of economic diversification was only gradually entering the consciousness of developmental economists and development planners. But Mabro was often ahead on new policy ideas. He first considered the concept (or more precisely, the centrality of the concept to economic development policy) of economic diversification in the late 1960s when he became a senior research fellow in the economics of the Middle East at the University of Oxford. His early research focused on the Egyptian economy and the recurring theme of '*diversification of* [its] *productive structure*.'[6] As Mabro's interest in petroleum began to develop and his focus shifted to the economics, politics, and international relations of oil, he must have (rightly) thought that the concept had the potential to contribute to the economic development agenda of oil-exporting countries. Unfortunately, his attempt to align our research interests with the theme proved premature.

This special issue of the *Forum* makes up for that missed opportunity. To catch up with Mabro's expectations, I will present in the remainder of this article a brief review of issues and policies of economic diversification in oil-exporting countries. The review, which draws in general on some of my recent publications, is in two parts: the first highlights dependence and vulnerability; the second provides some insight into the policies and implementation strategies adopted across the higher-achieving Gulf Cooperation Council (GCC) countries.

Dependence and vulnerabilities

Although now familiar and relatively well explored, the concept of economic diversification is open to many definitions and interpretations. It commonly refers to the process of structural transformation aimed at reducing over-dependence on a single sector. More specific definitions have to factor in the nature of the dominant sector, the development stage of the economy, and the degree of exposure to global markets. In the case of oil-exporting countries, a policy-relevant definition should further take into account their vulnerabilities to both cyclical and structural threats. These countries depend on petroleum exports as a major source of income and growth. As a consequence, they are extremely vulnerable to the instability and volatility of global oil markets. Since the 1986 oil-price collapse, such vulnerability has been a recurring risk and, because of the uncertain timing and magnitude of oil market downturns, a difficult one to mitigate. Among the risk mitigation tools available, fiscal stabilization funds are by far the most suited to a sovereign nation. Unfortunately, not all countries have such tools or enough surplus assets to source them. Those who do often fail the fiscal discipline test.

'OIL-EXPORTING COUNTRIES FACE STRUCTURAL THREATS THAT HAVE THE POTENTIAL TO UNDERMINE THEIR ECONOMIC GROWTH …'

Furthermore, and even more importantly, oil-exporting countries face structural threats that have the potential to undermine their economic growth and wealth creation well into the future. The most far-reaching of these threats are in three areas: contraction of petroleum export markets; unsustainable fiscal patterns; and severe unemployment.

The first threat stems from the irreversible contraction of the oil market, something that had not previously been expected in mainstream forecasts, when demand growth seemed inexorable. Even today, there is an undue expectation that potential demand for petroleum in emerging economies will compensate for declining demand in the OECD region. For example, this expectation does not take into account the fact that China and India are seeking a similar energy path to OECD countries, with, in addition, a pursuit of clean coal technologies to make better use of their massive domestic resources.

The major energy-consuming countries of the OECD–IEA have long shaped their energy policies at the confluence of energy security and climate change concerns. Accordingly, they have focused their efforts on the promotion of energy efficiency and low-carbon or renewable energies. Furthermore, in considering their security of supply, they have emphasized independence from petroleum imports in general, and from the Middle East in particular; the USA has seen some success in this respect, thanks to the vigorous development of its shale resources.

The second threat comes from patterns of fiscal spending. Whatever the outlook for global oil markets, current hydrocarbon export-based fiscal policies are unlikely to be sustainable in the long run. This is particularly the case when oil revenues are eroded by increasing costs, lower fiscal take and, in some countries, by the additional impact on per capita revenues of a sizeable and rapidly growing population. Long-term fiscal sustainability cannot be achieved without rationalizing public spending (of which subsidies are a very large proportion) and diversifying budget revenues by reverting to general taxation.

The third threat is from rising unemployment, the main cause of which is the dominance of the economy by a highly technologically productive (and thus low job-creating) petroleum sector. Oil-exporting countries – particularly those under demographic pressure – have long realized that reductions in unemployment cannot be achieved without addressing two main economic and social dimensions: first, by encouraging non-petroleum sector growth and private sector development; and second, by preparing unemployed nationals to take full advantage of job opportunities.

Policies and strategies in the GCC countries

Dependence and vulnerability are more acute in some countries than others; in the GCC area, countries have pursued more vigorous economic diversification policies. Their overall strategies involve a three-pronged approach:

1 vertical integration – developing businesses in the midstream and downstream sectors of the petroleum value chain;

2 horizontal integration – supporting the establishment of local private providers of energy logistics and energy supply services;

3 diversification into non-petroleum manufacturing and services.

These strategies have been supported with substantial financial resources and supply-side strengthening measures, which include sustained development of education, health, and public infrastructure. However, implementation of the strategies is still sketchy. What is clear from investment trends is that more emphasis continues to be put on the downstream sector, especially on its petrochemical segment.

This emphasis raises the question of whether the petrochemical industry actually contributes to economic diversification. Advocates of this option often point to the petrochemical industry's growth potential for higher value-added exports. They also highlight the opportunities it offers for further industrial development and industry-relevant research and education. While these arguments may be valid and should not be ignored it is also the case that the petrochemical industry tends to exhibit a pattern of performance, in terms of business cyclicality and low job creation potential, which is similar to the oil industry in general. Furthermore, governments have provided the petrochemical industry

'… RAISES THE QUESTION OF WHETHER THE PETROCHEMICAL INDUSTRY ACTUALLY CONTRIBUTES TO ECONOMIC DIVERSIFICATION.'

with strong policy support, including very low feedstock prices, in order to increase its competitiveness by enabling a low-cost structure. In so relinquishing the state resource rent, they have unintentionally encouraged rent-seeking behaviour. Hence investors and entrepreneurs may be reluctant to become involved in the more job-creating, but much less oil rent fetching, activities derived from the industry.

The implementation of these strategies would have been ineffective without state involvement – and the critical role that governments have played beyond supply-side strengthening. They have indeed been instrumental in developing consensual visions, devising policy frameworks, and shaping national development plans. In particular, to the extent that a credible economic diversification should rely on a growth strategy geared towards engaging the private sector in the development of non-oil tradable exports, they have focused their efforts on three state-level factors deemed most conducive to an enabling environment for enterprises:

- creating and maintaining a favourable and stable investment climate;
- accelerating reforms of the educational and vocational training systems;
- ensuring the availability of low-cost financing from both the state development agencies and a deepening regional capital market.

While much progress has been achieved, many challenges remain. Strengthening governance and creating an incentive structure that encourages

competition and discourages rent-seeking behaviour are among the most important such challenges.

'POLITICAL EXPEDIENCY HAS TAKEN PROMINENCE OVER ECONOMIC EFFICIENCY …'

In this respect, one should not underestimate the difficulties of policy making and implementation in the face of social and political realities in the region. Success or failure depends to a great extent on political economy, institutional and behavioural factors including rent-seeking, and resistance to reform by vested interests. In the aftermath of the Arab Uprisings, even the countries relatively shielded from the subsequent turmoil – as has so far been the case for the GCC countries – have found themselves grappling with uncomfortable dilemmas. In the end, political expediency has taken prominence over economic efficiency, thus slowing down the momentum of governments' economic diversification agendas.

Conclusions

On reading this article Mabro would likely concur with the emphasis placed on oil-producing countries' dependence and their vulnerabilities to the resulting threats. He would even argue that these countries have now to deal with an obsolescent pattern of savings, investments, and expenditures that was originally based on the unlikely assumptions of steadily growing global oil demand and safely rising international prices. Today, with flat demand, greater uncertainty about the future direction of prices, and growing domestic fiscal needs, these countries face even more dire threats. Turning his focus to the economic diversification policies being implemented within the GCC, Mabro would probably not admit the perception of a common 'Gulf model' that my generic and high-level overview seems to convey. He would surely refer to the rationale of the original country case studies he once initiated (the series 'The Political Economies of Oil Exporting Countries', which did not survive his retirement) to suggest that important variations in contexts and circumstances critically affect each country's policy and implementation strategy. In particular, differences in resource endowments, institutional settings, and socio-economic dynamics are key considerations in explaining the observed different paths and paces of the process. This leads me to conclude that Mabro would certainly like us to revive this once neglected field of research to give more weight to an eventual new book series on the political economy of oil.

Notes

[1] *Venezuela, the Political Economy of Oil*, Juan Carlos Boué, Oxford: OUP/OIES, 1993.
[2] *Nigeria, the Political Economy of Oil*, Sarah Ahmad Khan, Oxford: OUP/OIES, 1994.
[3] *Indonesia, the Political Economy of Energy*, Philip Barnes, Oxford: OUP/OIES, 1995.
[4] *Libya, the Political Economy of Oil*, Judith Gurney, Oxford: OUP/OIES, 1996.
[5] *Algeria: The Political Economy of Oil and Gas*, Ali Aissaoui, Oxford: OUP/OIES, 2001.
[6] *The Egyptian Economy 1952–72*, Robert Mabro, Oxford: OUP, 1974.

Oil and Arab economic development

Paul Stevens

In Robert Mabro's extensive contribution to the analysis of oil and Arab economic development, three themes are consistently present: concern over sustainability; emphasis on the central importance of developing human capital; and rejection of the concept of 'resource curse'.

Sustainability

Reflecting on oil markets in 2006 in his introduction to the book *Oil in the Twenty-First Century: Issues, Challenges, and Opportunities*[1] (quotations from which appear in this article) Mabro argues that the *'of any oil country is to establish the basis of sustainable economic growth in the long run'*. The underlying logic of this view is that irrespective of the future evolution of oil prices and export volumes, '*it is likely that the level or growth of revenues will not be continually sufficient to cope with demographic pressures and increasing development needs'*.

This view can be derived from two separate concepts. The first being the fact that oil is a depletable resource, while the second is the classic paradigm of economics involving ever-increasing wants in a world of constrained resources.

Oil is depletable in the sense of it being

an exhaustible resource (in geological terms, it is no longer being created). However, it is also potentially 'depletable' in value terms in a technological sense as energy alternatives and improved efficiency of oil use emerge. Thus 'peak oil' will happen because of a lack of demand not supply. An alternative way of expressing this is that oil revenues are NOT income in the conventional economic sense of a continuous flow of money derived from a reproducible factor of production. Thus a country has a national portfolio of assets, which includes oil below ground. Producing the oil and selling it simply switches a component of the portfolio from 'oil below ground' to another component, 'dollars above ground'. To be 'sustainable', this revenue needs to be invested in order to generate a future source of income. Once the barrel is produced it is gone forever. Only in this way can oil production be 'sustainable' over time and form the basis of continuing economic progress.

'THUS OIL CAN BE SEEN AS A WINDOW OF OPPORTUNITY TO PROMOTE DEVELOPMENT.'

At the same time, acutely aware of the high levels of poverty in much of the Arab World, Mabro realized that expectations were developing for improved standards of living and all the other paraphernalia of economic and social development. Thus oil can be seen as a window of opportunity to promote development; this development involves the diversification of economies to create reproducible income-earning assets over the long run. This however, is easier said than done. The challenges of diversification were the obstacles faced, which Mabro saw very specifically as: a limited resource base outside the oil sector, and an insufficient endowment of human capital.

Developing human capital

Mabro saw the development of human capital as key to the process of economic development and progress, but at the same time he realized that this was a process that '*takes a long time to yield its fruit'*. There is, however, an additional problem involved, apart from time lags. Developing human capital inevitably involves educating the population – in the broadest sense of the term. However, once you begin to 'educate' people, they are less likely to accept political systems in which they have little or no involvement. An educated population is one that will demand a political say in some shape or form. Thus in many of the Arab countries, as the twentieth century unfolded, the ruling elites were reluctant to allow the genie of education out of the proverbial bottle. Education to produce skills – such as those of doctors and engineers – was fine but not if it began to breed political unrest which challenged the position of the ruling elites.

At the same time, these same ruling elites were in the business of capturing as much economic rent as they could. In many cases they created what were in effect kleptocracies ('government by thieves'). A key consequence of this was that much of the private sector in the Arab World was effectively stifled and excluded from economic activity. There can be little doubt that economic development in any country depends upon an active and vibrant private sector. In the Arab World, with a few notable exceptions, this has for the most part been missing; political reform will be required if an effective private sector is to emerge in the future. In the language of the debate in the Soviet Union in the late 1980s: economic liberalization (perestroika) in the Arab World will not be possible without political liberalization (glasnost). This creates a fundamental contradiction for oil and development in the Arab World. On the one hand, economic progress requires political reform; but at the same time, oil revenues accruing to the state reinforce the elite captured economy and therefore the status quo.

'MABRO SAW THE DEVELOPMENT OF HUMAN CAPITAL AS KEY TO THE PROCESS OF ECONOMIC DEVELOPMENT …'

The Arab Uprisings, which began in Tunisia at the start of 2011, offered a brief glimmer of hope. Sadly, for the most part, these glimmers have been extinguished, at least for the time being. However, if we are moving into a lower oil price world – where government spending on jobs and subsidies will have to decrease – the ability of the current status quo to survive may well be restricted. This is especially true given the growing demographic pressures of a young population. For example, the IMF in 2011 pointed out that in Saudi Arabia nearly half the population was under 15 years of age (compared to 20 per cent in Norway, Singapore, and the USA). This is a typical pattern in the Arab World more generally. Whatever the outcome of the Arab Uprisings, Mabro was right. The future of economic progress in the region will depend upon the ability of the ruling elites to invest in and promote human capital development; this in turn will require political reform.

Rejection of the concept of 'resource curse'

A third common theme in Mabro's writing on oil and development has been his rejection of the presence of 'resource curse'. The term 'resource curse' argues that large windfall revenues from oil are a 'bad thing'

since they somehow damage the existing economy, ultimately leaving the nation worse off. The transmission mechanism from oil revenue to economic damage is complex but contains a mixture of Dutch Disease; crowding out by the oil sector; and various sociopolitical issues revolving around rentier societies and rent capturing elites. Mabro argued that: '*All oil-exporting countries although in different ways and degrees would be worse off today if they never had oil*.' The result of the revenues has been: '*improved health, nutrition, education, housing, public utilities and more generally the standard of living of at least part of the population'*. For the producers of the Gulf Cooperation Council (GCC) countries this has certainly been the case. Given the state of the GCC members before oil – dire poverty based upon subsistence economies with a little entrepôt trade – the simple 'resource curse' argument simply has no validity. Without oil revenues the GCC countries would probably not even exist as sovereign entities. However, with a more nuanced approach it is possible to turn the resource curse argument on its head to accommodate Mabro's point, while at the same time raising important questions relevant not only to the GCC but to other oil producers. Thus: rather than asking if the oil sector and its revenues caused damage to the rest of the economy (and why), instead ask why the oil sector failed to have a 'better' impact on the countries concerned (and why)?

'ATTEMPTS AT DIVERSIFICATION ARE NOT ONLY FAILING IN THE REGION, THEY ARE ACTUALLY GOING BACKWARDS.'

In other words this approach treats the issue of a 'resource curse' in terms of an opportunity cost, although it begs the question: how to define a 'better' impact? This brings the analysis back to the first of Mabro's themes: sustainability. Sustainability for an oil producer can only mean successful diversification of the economy away from dependence on oil revenue and the creation of an economy not dependent upon the export of crude oil. While this has been a major (and oft-stated) aim of Arab oil producers since the first oil shock of 1973, their record for the most part has been abysmal. In 2011 the IMF claimed that the GCC's non-hydrocarbon sector had formed 61 per cent of its GDP in 1990, but that by 2010 the figure had fallen to 51 per cent. As for the non-hydrocarbon primary fiscal deficit – an excellent proxy measure for oil dependence – for Saudi Arabia this rose steadily from a figure of (on average) below 50 per cent in the 1990s, to 140 per cent by 2010. In effect, attempts at diversification are not only failing in the region, they are actually going backwards. Apart from anything else, this means that the oil sector has failed to fulfil the role of a leading development sector (along the lines of textiles in Great Britain in the eighteenth century or railroads in the USA in the nineteenth century).

Mabro claims that part of the explanation for this failure to diversify and promote economic development is due to the fact that '*oil reduces the incentive to introduce painful policy reform'*. In other words, oil revenues have simply helped governments to paper over the cracks of a failing economy. Arguably this view undermines his own argument about the absence of resource curse, since the idea of oil revenues inhibiting economic and political reform is central to much of the 'resource curse' literature. However, whatever the reasons for previous failures, the diversification of Arab oil producers' economies is now moving to the top of the policy agenda. Growing concerns about climate change and unburnable carbon mean that the future of oil revenues must be viewed as being extremely uncertain. Such uncertainties are reinforced if we really are moving towards a period of lower oil prices. Thus the ability of any government in the Arab World to maintain an oil-dominated economy beyond the short term must be in question. The challenge is: how to diversify these economies and rebuild the income-earning portfolio of national assets to meet the needs and expectations of future generations? Mabro argues that, in the absence of alternative resources, the answer lies in developing human capital. This is undoubtedly true but, as argued above, a necessary condition for this to happen is political reform. Such reform would have the additional benefit of unleashing the enormous talents, abilities, and imaginations of the Arab private sector, releasing it from the shackles of the kleptocracies that have dominated the region for centuries.

Note

[1] *Oil in the Twenty-First Century: Issues, Challenges, and Opportunities*, Robert Mabro (ed.), Oxford: OUP/OPEC, July 2006.

A perspective on Robert Mabro's work and contribution to petroleum research

Majid Al-Moneef

1970s and 1980s: perception of Arab-dominated OPEC

To many of my generation who studied economics in the West in the 1970s and 1980s, developments in the oil market posed both research and cultural challenges. In the early 1970s, following what came to be known as the 'first energy crisis', we were confronted with a barrage of media coverage about the 'Arab dominated OPEC' who sought to 'strangulate the industrial world' by controlling the price of oil. This perception became more apparent following the transfer of pricing power from the concessionaire international oil companies to the governments of the oil exporting countries of the Middle East, North Africa, and Latin America. The Arab-Israeli war of 1973 and the Arab oil embargo against the USA then amplified this media bias.

It is within this atmosphere that my research interests – together with those of many other Arab students of economics and political science studying in the West at that time – were shaped. In the USA, we were faced with a very emotive debate directed against the Arab members of OPEC. We also had to contend with the dominant mode of thinking in US universities and research institutes which tended to be very US-centric, focusing on the impact of oil price shocks on the US economy, the theory of exhaustible resources, peak oil, the oligopolistic behaviour of OPEC, and the Dutch Disease Hypothesis. Those of us who had an interest in the political economy of oil or economic development had to find our way through this US-centred research tradition. The seminal work of MIT's Adelman[1] influenced research on the issue of oil pricing, production, and market structure for decades. Although the works of O'Conner, Sampson, Blair, and Jacoby were widely read, their influence on research was limited.

The situation was similar across the Atlantic, but the academic tradition was somewhat different. Political economy and development issues still had some influence on research in Britain and elsewhere in Europe. The works of Hartshorn, and Penrose and Mikdashi had some influence on research into petroleum economics and relations.

'MABRO PROMOTED DIALOGUE BETWEEN OIL PRODUCERS AND CONSUMERS AT A TIME WHEN THE ISSUE HAD NOT YET BECOME POPULAR.'

Robert Mabro, being from an Arab country and understanding the challenges of the region more than anyone else, was surely also confronted with the western media's negative view of Arab oil producers following the 1973 crisis. After studying civil engineering in Egypt, philosophy in France, and economics at London University, and specializing in economic developments of the Middle East at Oxford University, he switched his research focus to the economics and the politics of oil. Since then, he has devoted his research to understanding the various issues related to the very big questions facing the oil market. Mabro also promoted dialogue between oil producers and consumers at a time when the issue had not yet become popular; this led to his first co-authored work[2] in 1974.

OEPC, Oxford Energy Seminar, and OIES

I myself did not come to know of Mabro's work until after my graduation from the USA. Back in those days, when there were no Google search tools, I came across his work when studying the oil price episode of 1986. Two of his papers[3, 4] introduced me to the Oxford Institute for Energy Studies he had just established, I first met him in 1989 after attending his other creation, the Oxford Energy Policy Club. In that meeting, I was fortunate to meet the late Edith Penrose, whose research had already influenced many in the aftermath of the 1973 oil price increase, and Wanda Jablonski, whose journalistic insight and coverage of oil market relations through the publication, *Petroleum Intelligence Weekly* (PIW), guided many researchers since the 1960s.

Even then, Mabro was already critical of many of the dominant narratives around the oil market in the USA. For instance, he thought that the Hoteling rule was irrelevant when looking at a country oil producer. He also thought that for the oil-prolific Middle East, the issue of peak oil was too distant to make an issue from. Mabro argues that: '*it is not sufficient to say that an exhaustible resource will be eventually exhausted and that its production will decline until extinction after reaching a peak. These are not predictions. Such statements are of no interest whatsoever unless we are told the dates at which the peak will be reached, and the likely shape of the production curve before and after the peak*.'[5]

'MABRO NEVER BELIEVED IN ANY OF THE VARIANTS OF THE "OPEC CARTEL" THEORY.'

Furthermore, Mabro never believed in any of the variants of the 'OPEC Cartel' theory. Models of OPEC as a wealth-maximizing rational monopolist did not appeal much to him. Instead, he argued that: '*the revenue maximization objective which theory postulates and core producers would dearly like to achieve is not credible. One has to become content with a second best: to obtain through the pricing policy more revenues than would have accrued under a competitive market structure. This more may be much better than nothing but is likely to be very different from the optimum.*'[6] Mabro came to formulate his understanding of oil market issues without any pre-set hypothesis or prejudice. His annually organized Oxford Energy Seminar was a venue to understand the market by bringing together all stakeholders: academia, industry, governments, media, financial community, consultants, etc.

Mabro's ongoing significance

Mabro has also contributed significantly to current understanding of the concerns of oil producing countries, and of the challenges they face in developing their hydrocarbon resources and utilizing them for their socio-economic development. Prior to Mabro's work, there was little systematic academic focus in the west on issues such as economic diversification, or on the ways in which hydrocarbon revenues could be used to maximize socio-economic welfare outcomes. At the time, some may have considered his research as niche and of no relevance to prevailing mainstream research, in a market obsessed with the energy security debate and western independence from Middle East oil. This quickly changed in 1993, when he published his seminal book, co-authored with Paul Horsnell, on the Brent Market.[7] Prior to this time, the functioning of the world's largest market for crude oil had been poorly understood.

'PRIOR TO MABRO'S WORK, THERE WAS LITTLE SYSTEMATIC ACADEMIC FOCUS IN THE WEST ON ISSUES SUCH AS ECONOMIC DIVERSIFICATION.'

Although the focus of his research has been the Arab World, Mabro understood the challenges facing other producers – such as Mexico, Norway, Venezuela, and Russia – very well. He used his wide network – established through the OIES, the Oxford Energy Seminar, and the Oxford Energy Policy Club – to bring together producing and consuming governments, international and national oil companies, as well as producers of oil and those of other energy sources. He is highly regarded as a central figure in the field of oil research across Europe, Asia, the Middle East, and Latin America to this day.

Notes

[1] *The World Petroleum Market*, M.A. Adelman, Baltimore: Johns Hopkins, 1972.
[2] *Oil Producers and Consumers: Conflict or Cooperation*, Elizabeth Monroe and Robert Mabro, New York, 1974.
[3] 'On oil price concepts', Robert Mabro, OIES, WPM 3, 1984.
[4] 'Netback Pricing and the Oil Price Collapse of 1986', Robert Mabro, OIES, WPM 10, 1987.
[5] 'The Peak Oil Theory', Robert Mabro, Oxford Energy Comment, OIES, September 2006.
[6] 'OPEC and the Price of Oil', Robert Mabro, *The Energy Journal*, 13(2) 1992, pages 1–17.
[7] *Oil Markets and Prices: The Brent Market and the Formation of World Oil Prices*, Paul Horsnell and Robert Mabro, Oxford: OUP/OIES, 1993.

Robert Mabro and the theme of energy security

John Mitchell

'Energy security' falls within the broad range of Robert Mabro's work on energy, but it was not a leading issue. The phrase is a label for policy debate focused on the interests of developed oil importing countries. Mabro's approach has always been broader, with particular attention being paid to understanding the global market and its geopolitical context and making sure that the position of the oil exporting countries was examined and explained. His views were (and I think still are) that security depends on co-operation, based on interdependence; that 'the market' is an insufficient basis for co-operation; and that there is a role for governments of exporting and importing countries to work together in the development of a structure for oil prices, moderated by some kind of expert advice. Over the years, the balance between states and markets has shifted against his view. However, the recent collapse in oil prices and its repercussions may mean that the story is not completely over.

'THE BALANCE OF THE OIL WORLD AND THE CONVENTIONAL WISDOM SURROUNDING IT WAS TIPPED OVER DECISIVELY IN 1973 …'

My acquaintance with Mabro in the late 1970s developed into friendship and I worked closely with him in the Oxford Institute for Energy Studies (OIES) during the 1990s after I had retired from employment in the thinking parts of an international oil company (IOC). Mabro had begun his career outside the oil industry, as I had, and we both were born and grew up in countries outside the OECD. He once told an interviewer (about a scheme to substitute a computer room for the wine cellar of St Antony's, where he was Wine Fellow):'I'll be blamed because I'm an outsider, not a true Brit.' This position gave him a vantage point beyond the conventional wisdom of OECD governments and of the international companies based there. Growing up in Alexandria allowed Mabro to be at ease with people from other cultures. He collected pictures, maps, and books about Alexandria, lectured on its economy, and later wrote a thoughtful review of the nostalgia expressed by foreign writers who had spent time there.

Waning influence of the 'Seven Sisters'

Mabro came to oil at the end of the 1960s as a development economist, with published work on Middle East economies. (His book on Egypt[1] is still in print and a college text.) The oil world (described by Anthony Sampson in the early 1970s in his book *The Seven Sisters: the great oil companies and the world they shaped*) was disintegrating, as were the neo-colonial relationships between governments in the USA and Europe and the 'host' governments of the developing countries – whose oil the seven sister companies had controlled. At that time only a handful of people, such as: Wanda Jablonski, Jack Hartshorn, Walter Levy, and Edith Penrose, had access to high players in both government and companies, while in 1972 Morris Adelman of MIT had produced *World Petroleum Markets* his great work of economic but apolitical analysis.

1973, the Arab oil embargo, and warnings of finite oil stocks

The balance of the oil world and the conventional wisdom surrounding it was tipped over decisively in 1973 by the Arab oil embargo and the decision of OPEC member countries to break off negotiations with the IOCs and assume direct control of pricing and oil production in their countries. At the same time, press and politicians picked up the idea that 'oil is running out', supported by geologists and conniving oil company spokesmen. The position of the few academic and political specialists was overwhelmed. As Mabro wrote later: '*Not that those involved in governments, companies, consultancies, the media etc. are incapable of critical analysis. They just find it more comfortable to adopt the prevailing conventional wisdom. It is easier to communicate with others within a framework of shared views than to stand alone on the fringes.*'[2]

The events of 1973 had been a great shock to the western political establishments. They set up a confrontation between the OPEC countries and the OECD. The USA appeared a particular target, partly because of its role in provoking the oil embargo, but also because of its rapidly expanding dependence on imports from the Middle East. Henry Kissinger persuaded the OECD to create the International Energy Agency to manage and share supplies in the event of a similar supply crisis. During the 1970s, the IOCs were trying to sail against the wind of change, to maintain at least some of the economic value of their former concessions even as the host governments were carrying out the 1968 OPEC policy of 'participation' – which led in most cases to complete nationalization.

'Energy crisis' analysis – consumers' hopes for energy security

Into this new situation stepped new experts from other backgrounds – from economics, engineering, political science, even particle physics, with ideas for 'solving the energy crisis'. Funds became available to universities and institutes for work on energy, but, in the OECD countries, this was generally framed within the 'energy security' paradigms: the search was for solutions which would defend the USA and the OECD, rather than developing a system for governing oil trade and investment which both sides would find it attractive to support.

'HE REALIZED THAT A "SOLUTION" WOULD INVOLVE BOTH PRODUCERS AND CONSUMERS.'

Mabro was perfectly placed to create a new role in this situation, both for himself and for energy analysis generally. He had not been one of the pundits of previous conventional wisdom (though he said to me much later that anyone who had not been in the game before 1973 could not properly appreciate later developments). He was not personally or institutionally committed to thinking of 'energy security' in terms of the USA or the OECD; nor was he a 'front' for OPEC although, due to his personal history and his work on the economies of the Middle East, he understood the Middle Eastern oil producers, and took care that their interests were aired. He realized that a 'solution' would involve both producers and consumers. He personally had a very sympathetic manner (from cosmopolitan

Alexandria?), which made it easy for him to establish personal rapport in both camps. He was extremely intelligent and intellectually honest. His Oxford base, and its tolerance (or benign neglect) of new initiatives, gave him the freedom to move.

Establishment of bodies promoting energy policy debate and mutual understanding

The result of Mabro's involvement was a series of innovations: the Oxford Energy Policy Club (1976) for senior executives, the Oxford Energy Seminar (1978) for hopeful future senior executives, and the Oxford Institute for Energy Studies (1982) for future advisers and experts. In every case the idea was to bring together people from producing and consuming (in fact: exporting and importing) companies, governments, and institutes who would otherwise meet only in bilateral negotiations and lobbying. Mabro's skill was to preside over seminar meetings and research programmes with sympathy, academic rigour, and an attention to detail to induce participants to share observations, on topics presented by relatively nonpartisan experts, about the state of the energy and oil worlds.

When Mabro formed the Oxford Energy Policy Club (OEPC) in 1976 it met twice yearly and was attended by very senior company executives, officials, and a few 'pundits' such as Edith Penrose and Jack Hartshorn. This was a forum – unique at the time – where senior people could exchange information and sense the mood among their peers. Over the years many forums have come into existence for this kind of contact, so the OEPC now has less significance – and a lower level of attendance. At the time, however, the Club seem to be a raft in the somewhat stormy sea of relations between oil companies and their diverse governments.

Control vs cooperation

The 1970s was an era of economic planning in Europe, and of prices and incomes controls in the OECD generally. In the UK, nationalized power and coal industries confronted strong trade unions. Against this background Mabro found the person he considered the ideal chairman for the OEPC: Aubrey Jones who, from 1965 to 1970, had been chairman of the Prices and Incomes Board set up by the Labour Prime Minister Harold Wilson. In this capacity Jones had been tasked to set the framework for price controls and wage negotiations in the UK economy. Jones was a classic in-between man: son of a miner, ex-Conservative minister for fuel, successful industrialist, a graduate of the LSE, and nearly a member of the Labour Party.

I suspect that in Mabro's mind, the OEPC was a kind of trial version of the council of experts which he believed should guide a cooperative oil price regime organized by governments. The international oil market as we know it today did not exist in 1976. For decades, most international oil trade had taken place between upstream and downstream subsidiaries of the major IOCs. During the 1970s, as national oil companies (including the UK's short-lived British National Oil Company) replaced international companies in producing their countries' crude oil, they also took over the marketing of it. The increasing numbers of sellers and buyers made the idea of a closed trading system less realistic, but the open, regulated commodity markets we know today did not yet exist. It was not until 1983 that the New York Mercantile Exchange launched its contract for West Texas Intermediate, and not until 1988 that a similar futures market for Brent crude was created by the International Petroleum Exchange in London. These markets have, over the years, become the benchmarks for international and domestic oil trade, although there are still questions about the influence of so-called speculators or financial investors on them. There are also commercial reporting agencies which estimate the prevailing daily price on the basis of interviews with traders.

Development of the international oil market

Mabro viewed the rise of these half-open markets with scepticism rising to suspicion. Were the markets manipulated by the companies of the importing countries? Were the reporting agencies' reports similarly interfered with? Surely the price of Brent crude is too important to be left to reporters? Mabro and his colleagues carried out a pioneering study[3] at the Oxford Institute for Energy Studies (OIES) into the Brent market which put some of these doubts to rest, but I think in his mind 'market forces' were not the best answer to the pricing problem. Even if the markets regulated in New York and London could be trusted, up to a point, there remained the problem of the dominant producers and exporters. The relative stability of prices during the period 1986–2005 reflected the ability of OPEC members to regulate supply from production capacity, which typically exceeded demand. Was this a 'fair market'? Mabro was infinitely intrigued by the question of how the OPEC members would or should share production quotas, and before every OPEC meeting would test various combinations against his contacts, but no guiding principles emerged.

'I THINK IN HIS MIND "MARKET FORCES" WERE NOT THE BEST ANSWER TO THE PRICING PROBLEM.'

The decision by Saudi Arabia in November 2014 to step aside from attempts to control the price in favour of 'the market' leaves many questions unanswered:

1 How long will they maintain this policy, which is similar to that which they adopted in 1986?
2 As long as it lasts, and there is no OPEC regulation of supply (because of its inability to agree amongst its members on how to allocate production cuts), oil faces a fairly typical commodity cycle in which price movements affect investment, which in turn affects supply and demand in a later period.
3 The commodity cycle destabilizes oil exporting countries which are critically dependent on their oil export revenues both to pay for their imports and to support the government budgets which transfer income to the dependent non-oil sectors of the economy. A short period of US$100/bbl prices had enabled some of these countries to build up financial reserves – there was hardly time to spend the new income before the fall in price – but these will not last for long unless spending is cut. Austerity is at the door.

The need for stability

There are important differences between oil and other commodities. In some countries, waves of austerity will be extremely hard to manage and future exports are therefore at risk from political destabilization. The stocks which have built up in the OECD countries, and which are being built up in China and India, will provide some protection for importers against short-term disruptions, provided the stocks are used. However, in theory these stocks are not supposed to be used to stabilize prices per se or to stabilize the economic development of the exporters. Moreover, like the exporters' financial reserves, the importers' oil stocks will not last very long.

Is this the only or the best way? Mabro, and others, raised the question of a government-structured oil price framework in a book published by Brookings in 2010.[4] Such a framework, however, may not be wide enough. There is a case for combining issues relating to a form of price stability with some kind of economic stability for export-dependent countries.

However, such issues are now on different agendas in different organizations (there is also an agenda, under the current UN Climate Change negotiations, for countries affected by climate mitigation policies). Perhaps some version of Mabro's OEPC needs to be evoked to look for ways in which these subjects can be addressed holistically, without challenging the power or existence of markets represented by the commodity exchanges, or the sovereignty and economic independence, such as it is, of the oil exporting countries.

Notes

[1] *The Egyptian Economy 1952–72*, Robert Mabro, Oxford: OUP, 1974.
[2] 'The International Oil Price Regime: Origins, Rationale and Assessment', Robert Mabro, *The Journal of Energy Literature*, Volume XI, No1, June 2005, page 2.
[3] *Oil Markets and Prices: The Brent Market and the Formation of World Oil Prices*, Paul Horsnell and Robert Mabro, Oxford: OUP/OIES, 1993.
[4] *Global energy governance: the new rules of the game*, Andreas Goldthau and Jan Martin Witte (eds.), Washington DC: Brookings Institution Press and Global Public Policy Institute, 2010.

Energy security revisited

David Robinson

Robert Mabro has written and spoken widely on the topic of energy security. His views are summarized in a 2005 speech.[1] Drawing on that speech and my recent interview with Mabro, this article explores four questions of current interest. They address the definition of energy security, how to manage energy security risks, whether unconventional resources make the USA energy secure, and whether low oil prices undermine energy security.

What is energy security?

In 2005, Mabro made three points related to this question. First, he argued that energy security had always been about disruptions in international oil supply. He did not think that Europe had a natural gas security problem because there were so many actual or potential suppliers. Nor did he think that electricity security was an important issue because there were straightforward domestic solutions related to regulation and investment. Still today, for Mabro, the critical security issue is the potential for oil supply disruptions, fundamentally in the Middle East.

'FOR MABRO, THE CRITICAL SECURITY ISSUE IS THE POTENTIAL FOR OIL SUPPLY DISRUPTIONS …'

Second, he identified two reasons for

supply disruptions: political decisions and uncontrollable events, like wars and revolutions. He argued that political disruption involving the use of the oil weapon was no longer possible, at least with respect to the countries of the Middle East. The latter did not have sufficient power to maintain pressure on the largest consuming countries and regions; the power of retaliation was too great. On the other hand, uncontrollable events that hit oil production or transport facilities could pose a real threat to oil supply security. He holds the same views today.

Third, his focus on energy security has been on the relatively short to medium term. To the extent that Mabro refers to long-term energy security, he refers mainly to investment cycles related to oil.

With respect to his emphasis on oil, with the benefit of hindsight, it is clear that in 2005 Mabro underestimated the security issues related to natural gas and electricity. Today, there are real risks associated with Russian natural gas supply to Europe. These reflect a more general problem: that reliance on pipeline gas with major suppliers can entail greater risk than reliance on LNG. Furthermore, there is growing concern over the prospect of electricity outages, for instance in the UK and Belgium, due to inadequate investment in firm generation capacity. Mabro is right that solutions for electricity are regulatory, but they are certainly not straightforward. Moreover, in the EU, they involve international agreements among 28 countries whose interests diverge widely. Proposed solutions, including the introduction of 'capacity' markets alongside existing 'energy' markets, aim to encourage investment in generation, but we are a long way from a model where security of supply is assured.

On Mabro's second point, the emphasis on uncontrollable events seems especially appropriate today for the Middle East. However, energy security is not just about supply disruptions. It is about the balance of supply and demand. This suggests putting greater emphasis on the efficient operation of international energy markets.

On the third point, today energy security has a longer-term dimension related to sustainability. The science clearly indicates the contradiction between increasing consumption of hydrocarbons and avoiding dangerous interference with the climate. The problem is not about temporary or long-term shortages of oil, but that burning hydrocarbons could well cause a climate disaster.

How should oil importers manage the risks?

In his 2005 speech, Mabro warned that energy security concerns elicit fear and that fear is a bad counsellor. Although it was rational to take out some insurance against disruptions, the costs could well be much greater than the benefits. He recommended that the insurance include: strategic stocks of crude oil and products; a clear scheme for releasing the stocks in case of emergency; diversification of oil and energy; and promoting energy efficiency in use. Today, Mabro holds the same view.

'MABRO ARGUED THAT THE IEA'S EMERGENCY OIL SHARING AGREEMENT WAS SENSIBLE AND RELATIVELY COSTLESS.'

In our interview, Mabro argued that the IEA's emergency oil sharing agreement was sensible and relatively costless. However, he stressed that there was no guarantee that an IEA country would actually abide by the agreement in a true emergency. In other words, a sharing agreement offered some comfort, provided the perception was that the signatories would abide by the agreement when it really mattered. But in practice, that would depend on each individual country's interests at the time the emergency actually occurred.

Mabro also expressed the view that there were limits to using international financial and oil markets to hedge against price movements and physical shortages. Prices could rise too high and there were physical limits to storage at any given time.

'IT IS HARD TO ARGUE WITH MABRO'S EMPHASIS ON THE LIMITS TO WHAT MARKETS CAN ACHIEVE.'

All of Mabro's views on managing the risks of potential supply disruptions are sensible, but the conclusion on emergency sharing is provocative. He seems to be arguing that countries, including IEA members and non-members such as China, should sign up to relatively costless emergency sharing schemes, but meanwhile build up their own strategic storage in case the agreement breaks down under stress. (It is interesting to note that low oil prices are an opportunity to build strategic stocks. China appears to be doing just that.[2]) In my view, this is one further reason to question the future of the IEA, whose creation was sponsored by a country (the USA) that grows less concerned about energy security, while the largest and fastest growing energy consumers (such as China and India) are not amongst its members.

It is hard to argue with Mabro's emphasis on the limits to what markets can achieve. Nevertheless, liquid and efficient markets are a critical element of energy security. Indeed, in view of the possibility that emergency sharing regimes could fail when put under pressure, governments should be fostering more liquid and efficient markets to help cope with emergencies.

Do unconventional resources give the USA energy security?

In our interview, Mabro argued that the USA overstates the degree to which the development of unconventional energy resources provides energy security. He stressed the importance of distinguishing between different fuels. Shale gas is inexpensive in the USA and, consequently, the USA is now in a position to export this fuel and to use it for industrial markets such as petrochemicals. However, the USA still imports over 7 million b/d of crude oil and will continue to rely on crude oil imports unless natural gas replaces significant volumes of oil in the transport market, a view espoused by Jaffe and Morse (who argue that 40 million b/d of the global 85 million b/d oil market is open to competition from natural gas).[3] Mabro was especially sceptical of that view on the grounds that oil and gas are very imperfect substitutes, especially in transport.

Mabro also maintained that, even if imports fall from the Middle East, the USA should still be concerned about stability in that region and ensuring oil and gas supply there. Reducing US imports from that region does not make the USA more secure if the alternative imports come from other countries that are 'unfriendly', such as Russia and Venezuela. Furthermore, even if the USA relied less on Middle East oil, that region would continue to be the low-cost oil producer this century and supply at least a third of the world's crude oil. If supply in the region were curtailed for a sustained period, world (and US) oil prices would rise and threaten the health of the world economy on which the USA depends.

I agree with Mabro that the USA is very unlikely to become a net exporter of crude oil and that the USA exaggerates the extent of its energy security. It is of course conceivable that the USA, Canada, and Mexico will together become a net exporter of crude oil. However, a focus on net oil exports and energy independence misses the point: the USA will not be truly independent as long as its oil markets and prices are intimately tied to world markets.

Even if the USA does not become independent of world oil markets, the reduction in imports from the Middle East is changing US international policy. In particular, it facilitates the US 'pivot' towards Asia. In other words, the USA can dedicate fewer economic, political, and military resources to the Middle East, leaving others to contribute more to ensuring the security of oil and gas production and transportation. Javier Solana[4] has argued in the *Oxford Energy Forum* that this creates a dilemma for China, which is now the main market for Middle East oil and gas. If the USA dedicates fewer resources to the Middle East, China will be obliged to dedicate more resources there, but by doing so they facilitate the US pivot into Asia.

How do lower energy prices affect investment and security?

In our interview, Mabro emphasized the difference between the current low price of oil and how much rent there still is in the oil price. There is some very low marginal cost oil in some areas, in particular the Middle East. As long as that is the case, he argued, there would always be investment. So low prices hurt oil producers and investment in high-cost areas, but that alone is not a reason to expect an oil shortage.

He also stressed that non-price issues are more important than most people think. For instance, the Saudis could produce 14 million b/d, but could survive with 4–5 million b/d; their level of production is not determined solely by prices. Indeed, production in most countries is a function of history (i.e. the result of past investment decisions), as well as political decisions on revenue requirements, taxes, depletion, and other factors. His point is that low prices need not lead to a shortage of production.

'MABRO HAS ALWAYS EMPHASIZED THE IMPORTANCE OF EXPECTED DEMAND AND PRICES ON INVESTMENT.'

Mabro has always emphasized the importance of expected demand and prices on investment. For instance, in his 2005 speech, he addressed the question on everyone's mind at the time: whether prices of US$60–70/bbl were sustainable. Prices at that level were much higher than they had been. (The average WTI price in 1998 was US$14.39; in 1999, US$19.31; in 2000, US$30.37; in 2001 and 2002, around US$25/26; and in 2003, US$31.07. In 2004, it reached US$41.49 and in 2005 it reached a peak of US$69.85.[5]) Mabro's answer then was that it all depended on the behaviour of world demand over the next four or five years. If demand growth continued at 3.4 per cent per annum, prices would rise to the range of US$90–100/bbl, eventually choking off demand and world economic growth, leading to a sharp fall in prices. On the other hand, if demand growth were much slower, say 1.4 per cent per annum, non-OPEC production would rise faster than demand and OPEC would have trouble defending US$45–50/bbl. Either way, the conclusion appeared to be that it would be difficult to defend prices at US$60–70/bbl.

Mabro's views suggest that the relatively low prices we are currently experiencing ($50–60/bbl) are consistent with continued investment and supply security, even if there is a redistribution of oil supply to lower-cost regions. However, we need to interpret his message about expected oil demand in the context of the increasing flexibility of world oil supply. On the

one hand, concerns over climate change could well lower oil producers' forecasts of oil demand and prices in 20 years, thereby reducing investment and potentially creating oil supply shortages. On the other hand, the growth of unconventional resources has introduced a new flexibility on the supply side. If shortages do appear and oil prices rise, it won't take long for unconventional resources to come on stream. In effect, these flexible resources are capping world oil prices while contributing to the security of world oil supply.

Notes

[1] 'Oil Security and Oil Prices: Implications for Asia', by Robert Mabro, IEEJ Conference, Tokyo, 25 November 2005. http://eneken.ieej.or.jp/en/seminar/aef2005/Doc_Mabro_kityoukouen.pdf.

[2] 'China Boosts Buying For Oil Reserves Amid Drop in Global Prices', an analysis by Michael Lelyveld, Radio Free Asia website, 26 January 2015. www.rfa.org/english/commentaries/energy_watch/oil-01262015105428.html (last consulted, 16 March, 2015).

[3] 'The End of OPEC', Amy Myers Jaffe and Ed Morse, *Foreign Policy*, 16 October, 2013. http://foreignpolicy.com/2013/10/16/the-end-of-opec/.

[4] 'America's Perilous Pivot', Javier Solana, *Oxford Energy Forum*, 91, February 2013, page 3.

[5] 'Oil Security and Oil Prices: Implications for Asia', op. cit.

European gas security in historical perspective

Jonathan Stern

Nearly 30 years ago, Robert Mabro, on a rare excursion into European gas issues, wrote: '*Gas trade in Europe also raises political issues. In this area a distinction must be made between the risk of interruption arising from disagreements about the implementation of contracts, and the risk of interruption arising from international hostilities. The former is a bargaining problem which is referred to as political, although in reality the disagreements may be about economic clauses such as prices and volumes of exports. The latter is a problem which may arise when the parties to a contract are in conflict over issues unrelated to the gas trade*.'[1]

What we face today in the Russia–Ukraine relationship is precisely a combination of those elements. But we also face problems and conditions which could not have been remotely foreseen in the mid-1980s. Thirty years ago the major security issue was whether and where Europe would be able to secure sufficient gas to meet demand – which had been rising steadily for a decade and would continue to do so for another 20 years. In 2015 it is uncertain whether the most important security issues relate to gas supply, demand, pricing, or flows. The answer probably depends on which region of Europe, and which part of the value chain, is under consideration.

Security of supply – or demand?

While all the discussion of European gas security in the press is about Russia and the ongoing Ukraine crisis, gas market participants have many other issues occupying their minds. Preliminary data for 2014 show that European gas demand fell 13 per cent compared with the previous year; this continues a decline which started in 2009 and has reduced demand to the levels of the early 1990s. Many national markets have experienced double digit demand reductions with the power sector being a particular casualty: in several countries, nearly new and highly efficient gas-fired generating capacity has been mothballed, and some older stations scrapped. OIES projections suggest that overall European demand will not recover to 2010 levels until the mid to late 2020s. This raises difficult questions about the viability and timing of new infrastructure and the need for new contracts.

'OVERALL EUROPEAN DEMAND WILL NOT RECOVER TO 2010 LEVELS UNTIL THE MID TO LATE 2020s.'

What are the alternatives to Russian gas?

Thirty years ago Dutch production was already close to its maximum, but the UK and Norwegian continental shelves were producing around one-third and one-quarter (respectively) of their eventual peak levels. Today we expect conventional gas production from the UK, Norway, the Netherlands, and other continental European countries to decline by more than 100 Bcm/year (or 40 per cent from 2013 levels) by 2030. While the media is full of stories, both positive and negative, about European shale gas, there is very little prospect of significant production over the next decade – or probably over a much longer time scale either. Much more promising are the prospects for biogas production, despite the current need for significant subsidy.

As far as imports are concerned, Russia is the only major expansion source for pipeline gas. The situation in North Africa is not promising: Egypt has switched from exporting pipeline gas and LNG to becoming an LNG importer, Libyan exports are uncertain due to ongoing political instability, and the Algerian production and export outlook seems unlikely to improve in the wake of another relatively unsuccessful licensing round. In all these countries, domestic demand is increasing rapidly, fuelled by subsidized prices which are proving difficult to reform. The much-discussed Southern Corridor will deliver a maximum of 10 Bcm/year of gas starting at the end of this decade, with the possibility of significantly increasing that figure only from the mid-2020s.

LNG to the rescue?

The major prospects on the supply side rest with LNG. European import terminals have been running at less than 30 per cent capacity in recent years, but with Asian demand growth weakening and new supplies from Australia and the USA coming on stream over the next year, cargoes are already returning to Europe. This will be good news for the next few years, but the post-Fukushima (2011–14) period demonstrated how quickly Europe can lose LNG cargoes when Asian countries need them, and are willing to pay whatever price is necessary in order to secure them.

Price security

This brings us to the issue of pricing and price security. Thirty years ago – with the exception of the UK where the era of state ownership, with its combination of cost- and inflation-related pricing, was just drawing to a close – oil product-linked pricing dominated Europe and would do so for the following 25 years. Oil-linked pricing in long-term contracts cushioned customers against short-term volatility, through averaging and time lag mechanisms. But oil-linked pricing became untenable post 2008 due to a combination of recession-induced demand decline, supply surplus, oil price increases, (eventual) liberalization of gas transportation, and the emergence of market hubs. Gas became available at hubs at prices that were 30–50 per cent below oil-linked levels and by 2014, hub pricing had become dominant in north-west and central Europe. In these markets, conventional price risk-management techniques have become the security for larger customers, while smaller (residential/commercial) customers are protected from short-term volatility by regulation in some countries and retail competition in others (although in Britain the latter has become a controversial subject).

'… AND BY 2014, HUB PRICING HAD BECOME DOMINANT IN NORTH-WEST AND CENTRAL EUROPE.'

Russia–Ukraine gas relations and gas flows

To return to the Mabro distinction, the 2006 and 2009 Russia–Ukraine gas crises (which caused interruption of supplies to Europe) were mainly about contractual, and specifically price, disagreements. Events in 2014/15 are also concerned with these issues, but in the context of a complete breakdown in political relations, combined with military hostilities in eastern Ukraine. Russia has long taken the position that it is no longer possible to rely on Ukraine for the transit of its gas to Europe. Volumes transiting through Ukraine to Gazprom's customers have been progressively reduced with the creation of alternative routes through Belarus (the Yamal pipeline), the Black Sea (Blue Stream), and the Baltic Sea (Nord Stream). However, in December 2014 the first pipe for South Stream, an additional very substantial Black Sea route, was about to be laid when it was cancelled due to uncertainty that EU regulation would allow it to be built, and then to carry gas to Gazprom's European customers. The cancellation was accompanied by an announcement that the project would be replaced by Turkish Stream – a pipeline following an identical route for three-quarters of its length but with a landfall in Turkey (rather than Bulgaria) which will deliver gas to the Greek border, from where Gazprom's customers will be required to arrange transport.

The end of Russia/Ukraine sales and transit?

During the period up to 2020, the European Commission will play an important role in facilitating uninterrupted transit through Ukraine. Up to the end of February 2015, both Ukraine and Europe had got through the (relatively warm) winter without any interruption of Russian gas, which in no small measure reflected the success of the 2014/15 'winter gas package' which the Commission had negotiated with Moscow and Kiev. But Russian direct sales to Ukraine in 2014 fell to one-third of 2010 levels as 'reverse flow' deliveries, mostly second-hand Russian gas (gas flowing from Russia to EU countries and then back to Ukraine) increased.

But just as elements of the Cold War relationship between the Soviet Union and Europe appear to be resurfacing, so a major element of Cold War gas flows – from Russia to Ukraine with onward transit to Europe – is likely to be phased out. Russia's intention is that when the transit contract between the two countries expires at the end of 2019, none of its exports to Europe will be transported through Ukraine. How much of this plan is realistic from a logistical, commercial, and regulatory perspective is uncertain, certainly prior to 2020. But significant (albeit

decreasing from 2017 when Turkish Stream is scheduled to commence flowing) volumes of Russian gas will continue to flow through Ukraine, at least until the end of 2019, and the European Commission will probably need to manage this relationship on a continuous basis.

Security infrastructure is being built and new regulation is being introduced

Russia/Ukraine issues seem likely to dominate European gas (and perhaps general energy) security issues in the 2010s – just as concerns about Soviet gas deliveries to Europe did in the mid-1980s, although the context is different. In the 2010s, LNG is no longer the exotic preserve of the few: in 1985 three countries imported 13 Bcm of LNG; in 2013 nine countries imported 43 Bcm and new terminals are opening in the Baltic region hitherto dominated by Russian gas. Far greater interconnection and two-way gas flows between countries and national transmission systems have been dictated by regulation and facilitated by EU funds. A completely new commercial EU gas transportation regime, governed by national and EU-wide network codes, is in the process of being rolled out over the next few years.

'RUSSIA/UKRAINE ISSUES SEEM LIKELY TO DOMINATE EUROPEAN GAS … SECURITY ISSUES IN THE 2010s.'

… but will there be demand to fill this new infrastructure?

But at the same time as infrastructure is evolving to accommodate greater diversity, flexibility, and market responsiveness, the fall in gas demand casts doubt on the future of the fuel in Europe – in contrast to the rest of the world which is recording strong demand growth. And ongoing problems in the Russia–Ukraine relationship, which continue to create security concerns in Europe, are certainly not helping to promote a recovery of gas demand. These are developments that neither Mabro nor any other observer could possibly have foreseen 30 years ago.

Note

[1] 'The Prospects for International Trade in Natural Gas', in Mabro, R.(ed.), *Natural Gas: An International Perspective – Oxford Seminar Proceedings*, Oxford: OIES/OUP, 1986, page19.

The consumer–producer dialogue

Walid Khadduri

Among the early energy research subjects that Robert Mabro undertook was the producer–consumer dialogue – the topic that was at the top of the agenda during the late 1970s and early 1980s. The markets were in turmoil at the time, lacking direction and vision as to how the new balance of powers between oil producers and consumers would turn out. Conferences among leading producing and consuming countries were held to no avail; delegates pursued an elusive agreement, while there was much misunderstanding between the two parties, along with significant differences of interest on which neither side was ready to compromise. Mabro had little, if any, interest in these formal venues; he proposed instead the importance of launching an informal process, one which did not lead to any agreements, but which enhanced a better understanding among the actors. Mabro's thought were reflected in a paper,[1] quotations from which appear in this article.

'AMONG THE EARLY ENERGY RESEARCH SUBJECTS THAT ROBERT MABRO UNDERTOOK WAS THE PRODUCER–CONSUMER DIALOGUE.'

'Producer–Consumer Dialogue' was a subject much in demand at the time of the establishment of the Oxford Institute for Energy Studies (OIES) in 1982. OPEC influence was rising at that time, while the USA, led by National Security Advisor Henry Kissinger, advocated the establishment of the International Energy Agency (IEA), an organization representing the interests of industrial consuming states and countering OPEC influence. There was hardly any public communication between OPEC and the IEA at the time.

Interest in Dialogue receded, but was then revived by a joint France–Venezuela initiative which convened in Paris on 1 and 2 July 1991. The USA was represented by a higher-level delegation than had been the case at previous events. Although many at the time had given up hope of reaching successful results, Mabro set forth his views on the meaning and worthiness of the Dialogue process, arguing that *' distinction needs to be made between dialogue and a binding international agreement'*. He stressed that '*the dialogue should be conducted with an open mind and the aim of finding out whether multilateral arrangements are relevant to the solution of the problems at hand, not with the intention of negotiating from the start of*

such an agreement'. Mabro envisioned the OIES and its activities as a venue for such an informal and ongoing dialogue; the purpose being to advance knowledge and foster a better understanding among energy professionals through research publications, lectures, or informal discussions, rather than attempting to strike agreements among governments.

Mabro stressed the need for a 'free thinking way' of addressing the issues which lie behind interest in a multilateral approach towards energy problems; emphasizing regional and bilateral strategies which are proposed by other parties as alternatives; and suggesting an agenda for inter-governmental discussions.

Topics defined under the 'Dialogue' include: '*oil price instability together with its corollary, sharp variations in the revenues of developing and oil producing countries'*. Mabro distinguished two types of instability: discontinuous and significant changes in oil price levels, as well as normal day-to-day market fluctuations. He added that in the previous two decades (the 1970s and 1980s) '*oil prices moved from one to a very different level on three occasions as a result of shocks'*. The causes of these shocks were either political disturbances or economic behaviour (the investment cycle or aggressive competition for market share), while some were caused by both.

Mabro believed that the effects of big shocks are '*often very damaging. They can cause economic recession in the world at large or destabilize oil-producing countries in the third world*. [He observed that shocks] *due to political disturbances cannot be avoided by means of international energy policy; shocks caused by economic factors are avoidable; and in both cases adverse effects can be significantly mitigated*.'

How can the market be of assistance? Mabro argues that the market '*plays a very useful, yet imperfect, role in allocating resources in the short run but is unable to provide appropriate price signals for investment decisions that influence the oil supply/demand balance in the long run'*.

Peculiar features surround the oil market: a very low cost floor for crude production, and a very high price ceiling set by substitutes. He considers the setting of a price level to be a 'fairly arbitrary affair'. This raises various questions. Where does the market get guidance to set a price level? If it cannot receive guidance from economics, where should the price level be?

What should be done with the market? According to Mabro: '*Although nobody should interfere with the market, other than removing imperfections, and leave day-to-day movements entirely to its operations, the question arises as to who should provide it with the signal about a desired price level?'*

While Mabro does not at first offer a viable/pragmatic answer to the question he raises, he proceeds to propose the following areas as markers for market developments: improvements to the flow of economic information necessary for good investment decisions; provision of indicators to the market (regarding a level around which prices can fluctuate freely in response to short-term economic forces).

Mabro proposed the following topics as agenda items for energy dialogue:

- Schemes involving both the creation of a surplus capacity cushion in a number of oil-exporting countries, and strategic stocks in a number of oil-importing states.
- Measures to improve the functioning of the oil market.
- Ways to establish better information flows in investment.
- Review the issue of re-integration of the oil industry in ways that publicize the many suspicions of both industrialized and oil-producing countries regarding the intentions of those who advocate access to their industrial sectors or resources.
- The question of the oil price.

What was the purpose of the oil producer/oil consumer dialogue? Is it to avert excessive oil price instability, or gradually to improve mutual understanding between the two groups? Mabro held to the latter view, arguing that dialogue helps in '*removing certain psychological barriers, dispelling some damaging misconceptions and irrational fears'*. He did not see the utility of a formal dialogue or of multilateral negotiations between sovereign states, since these are only possible '*when the parties on* both *sides of the exporter/importer divide each faces serious problems which they wish to solve* [adding that the] *incentive to seek a dialogue arises from the recognition that agreed international measures may ease these difficulties and provide benefits to both parties'*. A few industrialized countries expressed interest in a dialogue in the mid-1970s and in 1979–80 when OPEC appeared powerful – at these times the producers were not enthusiastic for the idea. OPEC developed a strong interest in a dialogue in the 1980s, when global oil markets glutted and prices fell, but the industrialized countries were unconcerned.

The dialogue can no longer be limited to 'energy problems' in terms of investment cycles, supply disruptions, and prices. Mabro proposed that recent concerns about the global environment should be added to the agenda, as this is to the mutual benefit of both producers and consumers.

Note

[1] 'A Dialogue Between Oil Producers and Consumers: The Why and the How', Robert Mabro, OIES, SP2, 1991.

Robert Mabro and the consumer–producer dialogue

Ian Skeet

Robert Mabro has always been a realist. Maybe, if he had been brought up in Beirut rather than Alexandria, he would have been a cynic. Anyway, by 1969 he was, via SOAS, an economist in Oxford, at St Antony's. The later 1960s and the 1970s were, of course, the years in which OPEC was at its peak of influence and energy, in its various manifestations, was at the forefront of public awareness. For an economist who happened to be fluent in English, French, and Arabic, energy was an obvious interest to cultivate.

This happened also to be the period in which Shell was developing, under Pierre Wack, its scenario planning. In 1973 the company was in the position of needing to develop a better understanding of the thinking, aspirations, and motivations of oil producers, particularly those of the Arabian Gulf – while Mabro lacked any real understanding of the oil companies and their objectives. So, in 1973, Shell Planning arranged for Mabro to join them for a year and both parties benefited greatly.

OEPC, OES, OIES, and consumer–producer relations

Mabro's experience with Shell enabled, or at least greatly helped, him to create the Oxford Institute for Energy Studies (OIES) in 1982. The OIES, while primarily a research institute, can also be seen, together with the Oxford Energy Policy Club (OEPC, established in 1976), and the Oxford Energy Seminar (established in 1978), as an embodiment of consumer–producer relations and dialogue. It has always been a centre in which both sides could meet, discuss, propose, and argue about their respective interests on an informal and serious basis.

However, consumer–producer relations have also, and more visibly, had a formal existence in official and governmental circles. Indeed, they are a continuing and integral process on almost every level on almost every subject of international concern. In the context of energy, there have been specific examples of attempts to create a 'Dialogue' to achieve particular objectives – notably after the 1973 price takeover by OPEC and again in the late 1970s after the second bout of OPEC price increases.

'THE OIES … CAN ALSO BE SEEN AS AN EMBODIMENT OF CONSUMER–PRODUCER RELATIONS AND DIALOGUE.'

I doubt that Mabro ever imagined that these official Dialogue proposals would lead to any kind of agreement. In reality, the intentions of both sides – consumers and producers – were completely at odds. A majority of the consumers, led by the USA, was looking for a pricing system; the producers were looking for a firmer position in the general international trading and financial system. The net result of early negotiations was the formation of the IEA by the consumers without reference to the producers. Subsequently, the Conference on International Economic Cooperation (CIEC) experience covered everything and achieved nothing. And OPEC efforts to formulate its own Long Term Strategy did nothing for the producers.

Apart from these heavily ambitious, but practically fruitless, efforts at governmental level to create some sort of internationally workable set of policy guidelines or agreements, there were many voices in the energy industry, producing companies, the academic profession, think tanks, and also individuals who were encouraging, proposing, or pouring cold water on the whole idea of consumer–producer dialogue.

Mabro's paper promoting consumer–producer dialogue

As might be expected, Mabro entered this debate and produced an OIES paper[1] on the subject in 1991. Quotations from this paper appear in this article.

This paper offered a realistic, rather than an idealistic, programme for an attempt at Dialogue. Some elements of the paper would, in part at least, be relevant today – in the unlikely circumstance that anybody sought to reopen the debate, or even proposed such a thing, although the agenda would reflect today's problems (whatever they might appear to be) rather than those of 1991 which by now may seem embedded in history.

The paper opened with a concise statement about the necessary context in which dialogue could be effective. It says: '*The need for a dialogue with a view to eventual agreement or co-operation between two parties arises*

- *when each of them faces problems caused by the actions or policies of the other party, or both face common problems caused by external factors;*
- and *when there exists a belief that these problems cannot be easily solved (or that their effects cannot be significantly mitigated) by each party acting on its own or through the autonomous operation of market forces yielding rapid and relatively painless adjustments.*

In other words, there must be problems for both parties (perhaps of a different nature) that cause or threaten to

produce significant damages (perhaps to a different degree) to all of them. ... When these conditions are satisfied, it becomes legitimate, indeed rational, for all parties to raise and attempt to explore the issue of co-operation.'

It suggests the identification of the main features of the 'oil problem' as being either political or economic arising from:

- civil commotion in the exporting countries, international conflicts that involve these countries and the importers, or regional conflicts;
- under-investment that threatens a price explosion;
- a slack market that threatens a price collapse.

While the political aspects of the 'oil problem' are generally distinct from the economic, the effect of a sudden price increase or decrease can create political instability for the producers – the best example, perhaps, being the Iranian Revolution. The paper then concentrates on the nature of the oil market, before returning to the political questions that are inevitably intertwined in the market. The lack of consensus amongst consumers (in particular the difference in fundamental objectives between the USA, Europe and, to a lesser degree, Japan and the Far East) has always affected the international scene strongly.

The paper concludes by suggesting what the agenda might be for a useful dialogue between oil producers and consumers. It makes the obvious (but not necessarily observed) point that a dialogue does not imply agreement, least of all a multilateral agreement between states. Dialogue is nothing but an exercise in exploration which can lead to different types of discovery, or none. With this in mind, the paper suggests an agenda to include:

- The design of schemes to finance the holding of surplus capacity in the producing countries, and strategic stocks in the consuming countries.
- The form in which exchange of information on investment, both by countries and companies, could be usefully organized.
- The form in which information could be collated and published on production levels (by the producers) and on stock levels and prices of market transactions (by the consumers/companies).
- Discussion on the subject of investment guidelines and potential – both for oil companies in the upstream of producer countries and for producer countries in the downstream of consuming countries.

The paper specifically excludes the environment as a subject for dialogue – not because it was not of vital concern, but because in 1991 the issue was highly divisive and would have guaranteed the failure of any dialogue that might be started. The paper is also cautious, to the point of ambivalence, about the general subject of price level discussion. It accepts, however, somewhat unwillingly that price is better avoided in the opening stages of any dialogue although '*a permanent taboo would be a fatal and unnecessary mistake'*.

No Dialogue took place then, nor has it since, but, of course, dialogue has always continued.

Note

[1] 'A Dialogue Between Oil Producers and Consumers: The Why and the How', Robert Mabro, OIES, SP2, 1991.

NEW OIES PUBLICATIONS

Recent Research Papers

Key Determinants for the Future of Russian Oil Production and Exports
by James Henderson
April 2015

Gas Pricing Reform in India – Implications for the Indian gas landscape
by Anupama Sen
April 2015

US Coal Exports – The Long Road to Asian Markets
by Sylvie Cornot-Gandolphe
March 2015

The US Shale Gas Revolution and its Impact on Qatar's Position in Gas Markets
OIES in collaboration with CGEP, Columbia
March 2015

Evolution of Gas Pipeline Regulation in Russia – Third Party Access, Capacity Allocation and Transportation Tariffs
by Katja Yafimava
March 2015

Driving Forces of China's Energy and Emission Growths Between 2007 and 2010 – A Structural Decomposition Analysis
by Xin Li
March 2015

A Brief Political Economy of Energy Subsidies in the Middle East and North Africa
by Bassam Fattouh and Laura El-Katiri
February 2015

Recent Energy Comments

Europe's 'Energy Union' Plan – A Reasonable Start to a Long Journey
by David Buchan and Malcolm Keay
March 2015

China – The 'New Normal'
by Michal Meidan, Amrita Sen, and Robert Campbell
February 2015

THE OXFORD INSTITUTE FOR ENERGY STUDIES
A RECOGNIZED INDEPENDENT CENTRE OF THE UNIVERSITY OF OXFORD

UNIVERSITY OF OXFORD

57 Woodstock Road Oxford OX2 6FA
Direct Line: +44 (0)1865 889136
Reception: +44 (0)1865 311377
Fax: +44 (0)1865 310527
www.oxfordenergy.org

EDITOR: **Bassam Fattouh**
CO-EDITOR: **Laura El-Katiri**
Annual Subscription (four issues) £90.00

Oxford Energy Forum. ISSN 0959-7727. Published by Oxford Institute for Energy Studies, Registered Charity 286084.