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The future of Middle East oil in a globalized world

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**The international community's perceptions of
the future of Middle East oil, from the 1960s to 2000**

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Introduction

It is more appropriate to begin this interpretation of the past somewhat earlier than the 1960s. By then, the most important criteria for the international communities' perceptions of Middle East oil had already been established as a consequence of the exhilarating and complex set of developments and events in that newly emerging oil province in the 15 years since the end of World War II.

The Exposure of the Middle East's Oil Wealth

Between 1945 and 1960 the Gulf region plus contiguous areas of Iran and Iraq were revealed as an area of extraordinary – even unique – oil resources. Hints of such a phenomenon had emerged already in the 1930s, but confirmation of the situation was delayed by wartime conditions. Thus, in 1945 Middle East oil reserves were declared at a mere 3000 million tons, while the year's oil production was only 50 million tons, with this coming largely from Iran and Iraq, and constituting less than 10% of global production.

By 1960 production had increased 10-fold and to 25% of world output. Likewise, declared oil reserves had grown enormously to almost 25,000 million tons, with the Gulf States, rather than Iran and Iraq, accounting for most of the massive increase. The Middle East's reserves were now six times those of both the US and the USSR and they also gave the Middle East a close-to-100 year reserves to production ratio. Thus, the international community at that time had no difficulty in accepting the idea of "oil in the Middle East" as a "strawberries and cream" phenomenon.

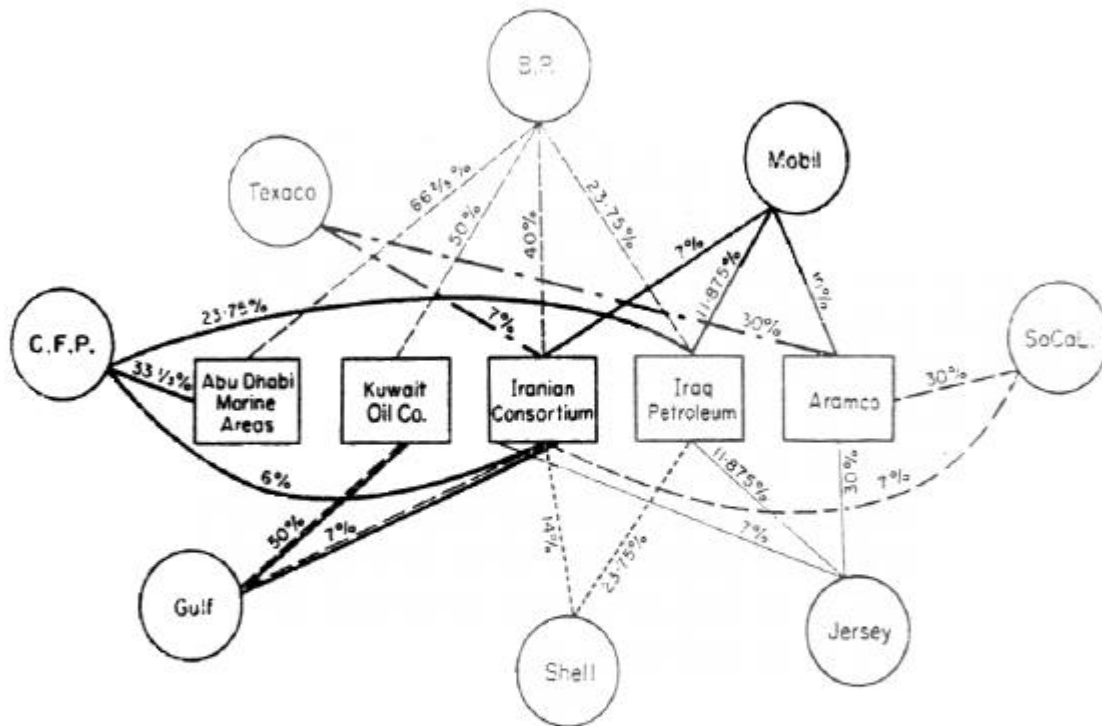
The Structure of the Oil Industry in the Middle East

Over the same period – and in the context of their much greater knowledge of the actual and potential wealth of the Middle East, all of the world's eight major oil companies, viz. in the "seven sisters plus the Campagnie Française de Petroles (CFP)" participated in the frenetic action to secure concessions: nominally in competition with each other, but, in practice, usually carving up the countries and their oil-rich areas in negotiated "interests". This process not only reflected their relative strengths as companies, but also the contrasting political and diplomatic weights of the United States, the United Kingdom and France.

As the late Professor Edith Penrose demonstrated in her seminal mid-1960s work, *The Large International Firm in Developing Countries* (Allen and Unwin, London, 1968) these companies exercised joint control over most Middle East reserves and production. Their complex, inter-weaving linkages in the Middle East's upstream oil industry at that time are shown in Fig.1 (see Penrose, E, *ibid.*, p.151). The international community also readily perceived the critical role and influence of these companies in the future prospects for Middle East oil.

Fig.1

OWNERSHIP LINKS BETWEEN THE MAJOR INTERNATIONAL OIL COMPANIES (including Compagnie Française des Pétroles) AND THE MAJOR CRUDE-OIL PRODUCING COMPANIES IN THE MIDDLE EAST 1966



From E.T. Penrose, *The Large International Firm in Developing Countries*, Allen and Unwin, London 1968

An Unholy Alliance?

The combination of the phenomena described above – from the oil itself to the countries under which it lay and further to the eight international petroleum corporations and their mother countries – came to be widely perceived as constituting an unholy alliance wielding a concentrated and critical mass of political and economic power: the potential dangers from which were already clear and which were perceived as getting worse in the global context of a rapidly increasing oil use, largely at the expense of indigenous energy – notably coal. Concern for an undue dependence on Middle East oil was thus already established a long time ago.

Security of the Middle East's Oil Reserves and Production

The concern, as described above, has, since 1960, thus been more or less continuously exacerbated by issues of security;

First, through “Cold War” fears of an intervention by the Soviet Union in the region: either, as argued over many years, from a perceived Soviet need for access to Middle East oil in order to sustain its expanding and increasingly energy-intensive economy; or, as a somewhat later point of view, from fears of the exposure of the western world's economy to the Soviet Union's potential ability to deny it access to Middle East oil supplies. Even the Soviet invasion of Afghanistan in 1980 was interpreted as an attempt to achieve that objective.

Second, there has been more or less continuing concern for the internal stability – and viability – of individual Middle east oil producing countries: from Iran in the 1950s to Saudi Arabia in recent years. These concerns have been realised from time to time, leading to interruptions in oil flows and to the renunciation of oil concessions with both sorts of events raising the risk profiles of the countries involved.

Third, there has been recognition of the prospect for the use of oil as a weapon in the Arab countries' conflict with Israel, given that these countries view the existence of that country as a consequence of Western actions and inaction.

The negative perceptions of the security of oil reserves of, and/or supplies from, the Middle East have proved to be more than conceptual and theoretical. On the contrary, they have been justified by interruptions to exploration and exploitation, in general, and to supplies, in particular on many occasions since 1950, viz. in 1951/4 from a revolution in Iran; in 1956/7, 1963 and 1967 over Israel; in the late 1960s over the exploitation of Iraqi oil; in 1973/4 with the Arab country's embargo on supplies to

importing countries, in the early/mid-1980s from the Iraqi/Iran war, in 1990/1 as a result of the Gulf War and since then by the United Nation's embargo on Iraq.

Quite apart from these political/military reasons, there have also been constraints on supplies for purposes of price manipulation: in the 1950s and 60s by the collusion of the operating companies over production levels (as shown by Professor Penrose); and in more recent decades by the influence of Middle East producing countries on OPEC policy making, notably in respect of quota limitations.

The demise, first, of the companies' joint control over oil supply and pricing mechanisms and, second, of their "ownership" of most of the Region's oil reserves and resources in the 1970s has not led – except occasionally and for short periods – to an uncontrolled flow of oil from the region's so-prolific available reserves and its well developed production and transportation infrastructure. Not only individual countries have, at different times, inhibited production as matters of policy or internal disturbances; but also various combinations of countries – sometimes as allies, but more often out of enmity between them – have done likewise. And beyond this, collective decisions by all or most of the countries as OPEC members have repeatedly kept supplies off the market: to a very much greater extent, indeed, than they have permitted their oil to flow freely in the context of a competitive market in which prices would have declined towards the long-run low supply price of Middle east oil (Adelman, 1970 and 1993). Overall, the world's 40+ years' experience of restraints on Middle East oil supply and exports has served, more or less continuously, to reinforce the international community's perception of the dangers of dependence on oil from the region.

The Middle East's Changing Role in Global Oil Supply and Trade

a. 1955-1985

Table 1 shows the evolution of Middle East's contribution to global oil supply and trade over the period since 1955.

Over the first 20 years to 1975 the oil companies' high degree of – but never absolute – control over Middle East oil ensured a rising exploitation of the reserves of the region so that annual production during that period rose six-fold, from 165 to 975 million tons. Over this period the, region's contribution to international oil trade rose from just under 50% of the 291 million tons traded in 1955, to almost 70% of the 1508 million tons traded in 1975: giving an almost 800% increase in Middle East oil moving into world markets. In essence, the

Table 1

Global, Middle Eastern and Regional Oil Production and Trade, 1955 to 2000
(in millions of tons)

	<u>1955</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>1999</u>
1. Global Oil Production	786	1079	1450	2352	2734	3082	2790	3179	3252	3452
of which Middle East	164	264	385	689	975	927	514	862	967	1052
- as % of Global Production	20.8%	24.2%	26.5%	29.3%	35.7%	30.1%	18.4%	27.1%	29.7%	29.7%
2. Oil Traded Internationally	291	456	677	1263	1508	1588	1264	1612	1815	2025
- as% of total production	37.0%	42.3%	46.7%	53.7%	55.2%	51.4%	45.3%	51.2%	55.9%	58.7%
3. Middle East Exports	145	229	340	631	918	864	447	704	825	909
- as % of internationally traded oil	49.8%	50.2%	50.2%	50.0%	60.9%	54.7%	35.4%	43.7%	45.5%	44.9%
4. Intra Regional Trade:										
- Total	106	190	238	527	402	433	539	570	643	737
- as % of international trade	36.4%	41.7%	35.2%	41.7%	26.0%	27.3%	42.6%	35.4%	35.4%	36.4%
- as % of M.E. exports	73.1%	83.0%	70.0%	83.5%	43.7%	50.1%	120.6%	81.0%	79.2%	81.1%
- of which										
a. Western Hemisphere	87	129	124	180	177	168	182	199	267	312
b. Europe/W Africa	11	42	158	310	175	193	308	313	296	308
c. East Asia/Australia	8	9	7	37	50	72	49	58	80	117

Sources: Data from sequential issues of B.P.'s Annual Statistical Review of the World Oil Industry from 1955 to 1980 and its Statistical Review of World Energy from 1985

international oil corporations exploited Middle East oil to the degree that it suited their strategies and enhanced their global after-tax profits (particularly after taxes paid to producer governments were made allowable against taxes at home). (Penrose, 1968) Even so, by 1975 the Middle East's reserves to production ratio had been reduced only from its earlier 100 year plus level to a still more than adequate 75 years.

After 1975 – by which date most of the oil companies' equity interests in Middle East upstream oil had been eliminated by state actions, the region's production and its contribution to the world supplies started to fall – eventually, by 1985, to little more than half of their 1975 peak values. Over this decade a near-stagnant global oil industry effectively turned its back on the Middle East in the context of the uncertainties concerning the region created by the new national ownership and control of oil supply and prices, the Iranian revolution and the political and military disruptions caused by the Iran/Iraq war. The whole region in more general terms was also full of uncertainties and adversely affected by the impact of the USSR's intentions in Afghanistan. The international community's adverse perceptions of the future of the Middle East had materialised with a vengeance.

b. 1985-2000

Initially, with the post-1986 oil price collapse and the re-emergence of growth in global oil demand, Middle East oil supply boomed. By 1990 output was up by two-thirds from its 1985 low and exports by almost 60%. It seemed as though the attractions of the Middle East's available production and transportation capacity and of competitive prices in a low-cost environment were successfully overcoming the negative international perceptions of re-dependence on the region's oil industry.

This was, however, abruptly cut short by the traumas of Iraq's take-over of Kuwait, its threat to the Saudi Arabian oilfields and the consequential Gulf War. Since then there has been almost a decade in which the Middle East has only modestly improved its position in the global oil market: with an increase in production of 12.2% compared with a 10.9% global increase; and a 29% growth in exports compared with 25.6% overall expansion in global oil trade.

These data thus appear to sustain the hypothesis that, post the oil crises/revolutions of the 1970s and the early 1980s and the subsequent Gulf War, the Middle east is struggling to regain its international status. Its share of global production – at 29.7% – is still well behind its 35.7% in 1975 while, even more emphatically, its share of world oil trade remains stuck at about 45% (43.7% in 1990; 44.5% in 1995; and 44.9% in 1999) compared with 69.9% in 1975 and even 49.8% in 1955 when Middle East oil development on a large scale was only just getting under way. Oil consumption within the region is now almost 15% of production, while an even higher percentage – 25% – of the additional output since 1990 has been for local use.

In these circumstances, the near doubling of the Middle East's oil reserves from 1975 (to 91.5 billion tons at the beginning of this year) is an unimportant phenomenon. Those additions to reserves are, quite simply, given the current reserves to production ratio of 87 years, required neither now, nor for the next 20 years (unless there are radical changes in the region's prospects in the short term). Thus, while the 65.4% share of the Middle East in global oil reserves may be an interesting fact, it is, nevertheless, an unimportant one for the future oil development prospects for the region. It may impress the "international community", but only in the sense that it more clearly perceives the continuing need to find and re-evaluate more reserves elsewhere so as to continue to maintain the rest of the world's approximately 20 years R/P ratio; in the context of a non-Middle East annual supply that is now 2.25 times greater than that of the Middle East.

Conclusions

Middle East oil developments can thus be perceived by the international community as potentially important in the long term – on the assumptions that oil demand will continue to grow over the long term and/or that non-conventional oil production, in the meantime, does not become economically viable on a large-scale.

For at least the coming decade, and conceivably well beyond that, the Middle East will generally continue to be perceived as the oil supply region of the last resort. Unless, in the meantime, the upward pressures on the international oil market, achieved through restraint on trade via the OPEC quota system and via the vagaries of the trading system, are eliminated and replaced by long-run-supply-price-related prices; either in a fully competitive system or in a fully-ordered one.

Neither of these rational alternatives for the future of oil are, however, perceived as very likely – or, even very desirable, given governmental, corporate and public preferences first, for less oil-intensive economies (oil currently supplies only 40% of total global energy supply, compared with 53% in 1975); and, second, for oil from sources other than the Middle East.

The latter development is reflected in a continuing and accelerating intra-regional trade in oil – as shown in Table 1: from only 400 million tons in 1975 to 737 million tons in 1999. In 1975, such trade amounted to only 26% of total international trade and to 43.7% of Middle East exports. In 1999, the comparable percentages were 36.4% and 81.1% respectively.

Over the past 50 years the Middle East has enjoyed only a short period of acceptability – in the context of a rapidly rising global demand for energy, in general, and for oil, in particular. By the late 1950s this previously acceptable role for the Middle East was already being questioned – under the impact of changing power relationships within the oil industry itself and given their impact on broader geo-

political and geo-economic issues. This evolving situation became even more fraught in the context of repeated supply interruptions and with the Middle East producers' use of oil as a weapon in support of their political and strategic objectives.

The next deterioration came when low-cost Middle East oil came to be priced at levels which bore no relation to costs and which made not only alternative oil supplies, but also alternative sources of energy (notably gas) relatively much more attractive, so enhancing competition for Middle East oil.

As shown above in this paper the Middle East has not recovered from the perception – and the reality – of its lack of attraction as a supply source. Indeed, had oil production of the Soviet Union/FSU not declined from year to year from 1987 to 1996 (from 650 to 350 million tons) then competition for markets by the Middle East suppliers would have been even tougher than has been – particularly after the end of the 'Cold War', when previous western perceptions of security and other dangers of reliance on Soviet oil were eliminated.

Thus, despite a Middle East still replete with reserves and with the possibility of its oil being a non-depleting resource (Mahmoud and Beck, 1995), it has basically failed to establish an international perception of itself as a reliable supplier on a continuing basis.

This central element in the 'real politik' of world oil is, however, tempered by widely-held conventional views of future global oil supply/demand relationships, viz. the inevitability of a world which cannot get by without a dramatic re-expansion of Middle East oil production and exports (IEA, 2000). In this context, the perceived international fears for dependence on Middle East oil are complemented by other fears arising from the hypothesised absence of any alternative to such dependence. The former fears are, as shown in this paper, justified by the past 25 years' experiences and by the continuing absence of evidence to indicate any near-future radical changes in the fundamentals of the situation (NB. Not even the re-entry of the international oil companies to the arena would instantly alter the perception of the unreliability of supplies on a continuing basis at prices related to costs rather than to politics).

The latter fears (arising from the hypothesised inevitability of dependence on the Middle East) are not so soundly based. The emergence from perceived supply prospects for demand developments which are very generous on the demand side (compared with the average annual rate of growth in oil use since 1975 of only 0.95%); but excessively mean on the supply side potential from outside the Middle East. In this view what is missing is even the most basic consideration of the recent rapid technological developments ever in the exploration for, and the exploitation of, oil reserves. Such expertise, having been initiated in a few limited areas (both onshore and offshore the United States, offshore Brazil and Angola and in the North Sea), is now diffusing around most of the world with oil potential – except, ironically, in the Middle East where the upstream industry generally have been starved of investments

and expertise. Under such conditions, any forecast of the inevitability of the world's future dependence on Middle East oil has a low probability of being correct.

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An Abbreviated Version of:

Table 1. Global, Middle Eastern and Regional Oil Production and Trade (in millions of tons)

	<u>1955</u>	<u>1975</u>	<u>1995</u>	<u>(1999)</u>
1. Global Oil Production	786	2734	3266	(3452)
of which, Middle East	21%	36%	30%	(30%)
2. Oil Traded Internationally	291	1508	1815	(2025)
of which, Middle East Exports	50%	61%	46%	(59%)
3. Intra-Regional Trade	106	402	643	(737)
as % of Middle East Exports	73%	44%	79%	(81%)
4. Trade:				
a) within Americas	87	177	267	(312)
b) within Europe and N.W. Africa	11	175	296	(308)
c) within Far East	8	50	80	(117)

Source: P.R. Odell, the Global Oil Industry: the Location of Production – Middle East Domination or Regionalisation? Regional Studies, Vol.31, No.3, 1997, pp.311-322. (Data for 1998 from BP/Amoco Statistical Review of World Energy, London 2000).

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