

Is a Third Oil Crisis Looming Before the End of the 1990s?

by Mamdouh G. Salameh*

As we approach the end of the 20th century, two major intractable but, nevertheless, inseparable factors will most decisively impact the price of oil and determine whether a third oil crisis could be in the offing before the end of this decade. The two factors are the shrinking *security margin* – the gap between demand and production capacity – and global oil security. The *security margin* had been large enough since the early 1980s through to the early 1990s to be able to absorb the Iran-Iraq War and the Gulf War with all their disruptions and loss of crude oil output, but no more. On the other hand, global oil security is closely linked to the geopolitics of oil and the new political order in the Gulf. The bombing of a U.S. military mission in Riyadh last November and Dhahran in June this year, serves to underscore how fragile political stability is in Saudi Arabia and the Gulf at large and indicates that any significant reduction in U.S. involvement in Saudi Arabia could presage an unraveling of the existing order and undermine global oil security.

The Perennial Problem of Capacity Expansion

A major element in global economy policy-making is the price of oil. For oil exporters such as OPEC member countries, oil remains the single most important source of income. Their annual budgets are predicated on an oil price level sufficient to generate revenue to pay for the imported goods and services required by their growing populations as well as to sustain their welfare systems. Other developing oil-exporting countries outside OPEC are affected similarly.

Simultaneously, the oil-consuming countries also watch the oil price closely since energy, of which oil is the key component, is an essential input in their production processes. Thus, the price at which oil supplies can be obtained has an important effect on the behavior of their own indices and other micro-indicators and so, indirectly, on monetary and fiscal policies that are triggered by inflation rates.

Significantly, oil-consuming countries have always looked on imported goods, such as oil, as an important source of taxation revenue, since demand for it is inelastic, i.e., to say, it varies little as the price changes. Moreover, given their concern for price stability, these countries have more room to maneuver when the border prices of these goods are low. This was demonstrated in the case of oil when, as a result of the price collapse in 1986, many of them took the opportunity to raise tax rates on petroleum products.

Thus, it is clear that the interests of the net oil exporters and importers are diametrically opposed as far as the price of oil is concerned. Both are effectively staking a claim to the significant element of "economic rent" built into the price of oil. The rent element contained in the value of a refined barrel of oil is usually distributed between the producers in the form of crude oil price, and consumer governments in the form of the tax-take on petroleum products.

* Mamdouh G. Salameh is an international oil economist, a consultant to the World Bank in Washington and a technical expert of the U.N. Industrial Development Organization in Vienna. He is also a member of the International Institute for Strategic Studies in London.

However, taxes on energy, irrespective of their stated objectives, all translate into one thing: a redistribution of the oil barrel value between producing countries and consumer governments. And the end-result is that more of the economic rent is being creamed off by consumer countries, while the implied price increase also reduces final demand. Therefore, for an oil-exporting country, petroleum taxation is not just a fiscal policy in a distant land, it impinges directly on its crude oil export prospects, thus putting pressure on crude oil prices and, ultimately, on its revenue. In 1993, for example, the per-barrel net income of oil producers was only 19 percent and 21 percent of the income earned by Italy and France, respectively. Only in the case of the United States did producers earn almost the same amount of income from the traded barrel.¹

The present distribution of the rent in favor of the consuming countries coupled with the present regime of low crude oil prices, could have a serious impact on international oil markets in terms of the timely development of the extra production capacity needed to cope with the projected rise in global oil demand in coming years. If prices and, by implication, the share of the barrel of oil accruing to OPEC producers remain weak, they would neither have the incentive nor the resources to invest in capacity expansion in anticipation of higher demand knowing full well that consumer governments will earn several times more from such an investment.

The financial situation of OPEC's Gulf producers and, therefore, their ability to provide capital for maintaining and expanding their oil production capacity has recently become more of a problem, partly as a legacy of the weaker oil markets of the late 1980s since oil exports still generate around 90 percent of these countries' revenue.

The financial constraints of the Gulf producers have been aggravated by many factors including the weakening of the value of the U.S. dollar and the costs and consequences of two major conflicts in the region within a decade.

The recourse of the Gulf countries to large-scale borrowing to overcome their financial constraints started in the mid-1980s and was based on the assumption that budget deficits can no longer be easily covered from reserves.² The total external debt of the Gulf countries has consequently increased from \$6.2 bn at the end of 1980 to \$168 bn in 1994, representing 1.9 percent and 66 percent of GNP (at current market prices), respectively. It accounted for the equivalent of 3.4 percent of the total value of exports in 1980 and 187 percent in 1994 (see Table 1).

The most pressing challenge facing OPEC at the present time is how to cope with the weak oil price. Price signals are, to say the least, not encouraging. Given that \$180 bn will be required in the next ten years, by OPEC alone, for capacity expansion, we cannot expect an opportune mobilization of capital but rather an underinvestment which will only become visible in the last years of the decade.³

Yet without outright investment in additional capacity, capacity constraint may start to bite at some point in the not-too-distant future. Gone are the days when we were sitting on almost 50 percent of unused capacity with prices at levels which are double those of today. In 1985, only eleven years ago, OPEC was producing at only 55 percent capacity. This

¹ See footnotes at end of text.

Table 1
External Debt Indicators of the Gulf Countries
1980-94

	External Debt (\$bn)		Debt/GNP at Current Market Prices (%)		Debt/Exports (fob) (%)	
	1980	1994	1980	1994	1980	1994
Iran	6.2	20.0	6.7	44.0	43.0	123.0
Iraq	-	90.0	-	119.0 ¹	-	634.0 ¹
Kuwait	-	9.0	-	37.0 ¹	-	78.0 ¹
Saudi Arabia	-	39.0	-	31.0	-	94.0
UAE	-	10.0	-	27.0	-	47.0
Total Gulf	6.2	168.0	1.9	66.0	3.4	187.0

¹ Based on 1989 figures.

Sources: *Platt's Petroleum Insight*, Dec. 13, 1993; *Arab Oil & Gas Directory*, 1993; Author's calculations based on data from the *OPEC Annual Statistical Bulletins*, 1992-94; *MEES*, Feb. 3, 1992; The Military Balance, 1996; 96, IISS.

allowed for the great expansion of production in the late 1980s. That was sufficient to offset the loss of both Iraq and Kuwait production during the 1990-91 Gulf conflict. In 1994, capacity utilization was estimated at 89 percent. By 1995, capacity utilization has risen to 92 percent, and barring the re-entry of Iraq, capacity utilization should have risen to an estimated 94 percent in 1996 with a growth of 1 million barrels per day (mb/d) in global demand (see Table 2). This is not a comfortable situation for the incremental supplier, especially amid signs of recovery and growth in the global economy led by the U.S. economy.

Table 2
OPEC: Current Production, Production Capacity and Capacity Utilization, 1985-96
(mb/d)

	1985	1990	1994	1995	1996
Production capacity	31.00	29.00	31.00	31.00	31.00
Actual production	17.00	23.20	27.28	28.52	29.00 ¹
Capacity utilization (as % of capacity)	55	80	89	92	94 ¹

¹ Estimated (barring the reentry of Iraq).

Sources: IEA, 1995; Centre for Global Energy Studies, London; *OPEC Annual Bulletins*, 1994-95.

U.S. and Global Dependence on Gulf Oil

With the end of the Cold War, the Gulf region has become more important for United States' national interests and the world at large because the importance of Gulf oil is increasing. Not only does the region contain 65 percent of the world's proven crude oil reserves but there is also a growing global and U.S. dependence on Gulf oil.

In 1994, more than 33 percent of the industrialized world's oil was supplied by the Gulf. And also in 1994, the United States imported 53 percent of its oil needs, half of which came from the Gulf. By 2000, the United States could be importing 66 percent of its oil needs, three-quarters of which will also come from the Gulf (see Table 3).

And should current trends hold, the world's dependence on Gulf oil will increase with Gulf producers accounting for a projected 40 percent of the world's oil needs in the year 2000 and 48 percent in 2010. One new development will be the increasingly likely Chinese dependence on oil from the region with economic and geopolitical consequences.⁴

Table 3
U.S. Crude Oil Imports, 1985-2000
(mb/d)

	1985	1990	1991	1992	1993	1994	1995	2000	85-00	% Chg
Production	10.58	8.92	9.08	8.87	8.59	8.36	8.11	6.65	-37	
Consumption	15.17	16.61	16.85	17.10	17.24	17.75	18.16	19.60	+29	
Total imports	4.59	7.69	7.77	8.23	8.65	9.39	10.05	12.95	+182	
Imports from										
Middle East	0.66	2.77	2.95	3.62	3.98	4.70	5.23	9.71	+1371	
As % of Total	14	36	38	44	46	50	52	75		

Sources: *BP Statistical Review of World Energy*, 1996; International Energy Agency; U.S. Information Administration; Author's projections.

Oil Industry Capital Replacement

The capital stock of the oil industry has been aging since the early 1980s. The failure in the 1980s to renew production capacities, refineries and transportation systems can be attributed to low rates of return based on assumptions of slack oil market conditions and much lower prices than in the 1970s.⁵

A key finding in a major study on the changing demand for capital in the global oil and gas industry by *Petroleum Intelligence Weekly* estimates that the capital requirements of the industry during the next ten years will range from \$800 bn to \$1400 bn. Of these amounts, the upstream sector will need between \$572 bn and \$1000 bn depending on the pace of change in the emerging markets and the future level of oil prices.

Downstream spending requirements will be equally robust, given the continued impact of environmental regulations and product demand growth in the Asia-Pacific region, ranging from \$173 bn to \$230 bn. In addition, major new demands will come from new liquefied natural gas (LNG) projects and the continued pace of energy asset privatization, adding a further \$55 bn to \$175 bn.⁶

The oil industry is facing a dilemma: an increasing number of worldwide investment opportunities but few that could provide the scale and return required to replace reserves, production and earnings. A key issue in the 1990s will be to what extent commercial investors are prepared to accept political risks. The general trend seems to be that capital travels faster but stays closer to home. Moreover, in an uncertain world with low oil prices, investors (even oil companies) are staying short and liquid, playing margins rather than committing for long-term projects as is required for a balanced development of the global oil industry. Such a balanced development in the oil and gas sectors necessitates some \$172 bn per annum to maintain present capacities. Indications are that, worldwide, probably some \$100 bn per annum will be invested. Hence, there is the risk of underinvestment in the oil industry during the 1990s because of low oil prices, global fragmentations and commercial investors' short-term, close-to-home orientation.⁷

Falling Oil Stockpiles in OECD Countries

Another disturbing factor is that crude oil stockpiles in all the industrialized countries are now at their lowest level since 1980 while American stockpiles are now at their lowest levels since mid-1977, according to reports from both the International Energy Agency and the American Petroleum Institute. Low stocks are one reason some analysts say oil prices will

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rise. Another is the belief that America's oil-guzzling economy is gathering steam with unemployment on a downward trend.

Even before the latest outbreak of Middle East terrorist attacks against Israel and U.S. military personnel in Saudi Arabia, some influential voices in Washington were starting to express deep concern about the growing U.S. dependence on Gulf oil. It has been pointed out by these same voices that during previous oil crises, the United States was competing for crude oil supplies with its NATO allies and Japan, a circumstance that permitted a cooperative response to supply shortfalls. But in the future, the main competitors will be the east Asian countries, particularly China, which by 2010 will be consuming more oil than the U.S., and which are already establishing stronger ties with the Gulf countries. Yet, in the face of these impending problems, the U.S. is selling part of its strategic oil reserve. The U.S. government has sold 7 million barrels (mb) of the reserve to raise money to help balance the Federal budget and is contemplating the sale of a further 32-75 mb.

Oil Security: The Iran and Saudi Factors

Because of its victories in both the Cold War and the Gulf War, the United States is now the pre-eminent external power in the Gulf. This factor, in addition to the financial needs of the Gulf producers, has helped the United States and its allies in the Group of Seven gain a substantial degree of oil security. Without revolutionary changes inside the Gulf Cooperation Council (GCC) states, especially Saudi Arabia, there is very little prospect that Gulf oil will be withheld from international markets in the near future.⁸

However, there is a growing hostility between the United States and Iran. Iran has embarked on a huge military modernization program and a build-up of military capability. But it is Iran's attempts to acquire nuclear and missile technology that are worrying the U.S. The current Iranian conventional and unconventional rearmament programs taken together underscore, in the opinion of the U.S., the Iranian desire for regional hegemony. Not surprisingly, Iran opposes a U.S. military presence in the Gulf region and GCC ties with the U.S. because it regards them as obstacles to achieving its regional goals.⁹

Therefore, unless Iran curbs its nuclear and missile programs and acquiesces to the new order in the Gulf as well as puts an end to its opposition to the U.S.-brokered peace process in the Middle East and its sponsorship of terrorism, hostility between the U.S. and Iran could escalate into an armed conflict which could see the U.S. making a preemptive strike against Iranian nuclear installations and Iran retaliating by mining the Straits of Hormuz. In such a dire situation, oil shipments through the Straits of Hormuz could be threatened and global oil security could be undermined, leading to rocketing oil prices reminiscent of the late 1970s.

And to complicate matters further, there is growing resistance by the Saudi Islamic Fundamentalist movement to an American military presence in Saudi Arabia. The Saudi fundamentalists oppose the basing of American troops on the holy soil of Saudi Arabia and seek to replace the Saudi ruling family with a government that would adhere more strictly to Islamic law. This has been demonstrated by the June 25

bombing in Dhahran in which 19 American military personnel were killed and the November 1995 bombing attack in Riyadh that killed five Americans. The Saudi fundamentalists are threatening more such attacks. Further, each enlargement of the American presence there and in the GCC states, will make matters worse. All of this will be directed to suppressing the radical Islamic movement and strengthening the Saudi government. It will have the opposite effect.¹⁰

It is the political failure of the United States to address the issue of its growing dependence on imported oil that led it to be continuously involved in Gulf politics and security issues. The consequences for regional security are twofold. On the one hand, the U.S. commitment is now intrinsic to the prevailing balance of power and any significant reduction in U.S. involvement could presage an unraveling of the existing order and also undermine oil security. On the other hand, the U.S. and allied Western presence is viewed with antipathy not only by those regimes that it is designed to contain, but also by Islamic militant groups who see it as underpinning governments to which they are opposed.¹¹

The Gulf War is likely in the future to be seen as the unnecessary victory that eventually led to America's forced withdrawal from the Gulf region. It will be seen as having weakened the security of U.S. access to Gulf oil. It will be understood as having accomplished this by providing Washington with the rationale for substituting a permanent American military presence on the Arabian Peninsula (there are 5,000 American troops in Saudi Arabia) for what previously had been an extremely discreet diplomatic and commercial presence. This will be seen as having undermined the pro-American governments of the region and strengthened radical Islamic movements.

Conclusions

Increasing global dependence on OPEC oil (mainly Gulf oil), tightening production capacity, shortfalls in the replacement of the capital stock of the oil industry and falling crude oil stockpiles in the U.S. and other industrialized countries, all point to a hardening of oil prices, probably within this decade. To these factors must be added the risks of a major shift of energy patterns such as major closedowns of nuclear capacity, caused by another nuclear accident, any interruption of Russian gas supplies to Western Europe, a blockage of the Straits of Hormuz or a hasty withdrawal of American troops from Saudi Arabia. Under such conditions, one has to seriously consider the possibility of a third oil crisis of a magnitude capable of again disrupting the global economy, triggered again by political upheavals in the Middle East.

Footnotes

¹ Bright E. Okogwe, "Sharing Out The Downstream Barrel: Imbalance May Impact Investment," *OPEC Bulletin*, Vol. 26, No. 5, May 1995, p.11.

² Nagi Abi-Aad, "Challenges Facing The Financing of Oil Production Capacity In The Gulf," *Petroleum Review*, London, February 1995, pp. 83-84.

³ Alirio A Parra, "OPEC: The Longer View" (A Paper presented to the 16th Annual North American Energy Conference, Dallas, USA, Nov. 6-9, 1994), p.9.

⁴ Zalmy Khalidzad, "The United States & The Persian Gulf: Preventing Regional Hegemony," *Survival*, Vol. 37, No. 2, Summer 1995, pp. 95-96.

⁵ Paul Tempest, "The Changing Structure of The Global Oil & Gas Industries" (A Paper presented to the 20th ICEED Conference, Boulder, Colorado, April 1993), p-4.

⁶ *Energy World Journal*, London, Dec. 1995, p.3.

⁷ Herman Mulder, "Energy: The Risk of Underinvestment," *Petroleum Review*, London, Dec. 1993, pp. 569-570.

⁸ Khalidzad, *The United States & The Persian Gulf*, p. 96.

⁹ *Ibid.*, pp. 99-106, also the *Sunday Times*, London, 21, July 1996, p.p. 14-15.

¹⁰ *The Japanese Times*, Sunday, 30 June 1996, p.21.

¹¹ Rosemary Hollis, "Stability in The Middle East: Three Scenarios," *Petroleum Review*, London, May 1996, pp. 205-207.

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Perspective on the Future

I would like to close with a brief summary of the dynamics of the North American energy market as we enter the 21st century. The most visible long-term change is the sweeping deregulation of gas and electric utility markets and the transportation of their fuels. This is part of an ongoing process, not limited to North America. It reflects the current philosophy that the market is a better allocator of these fuels than the government.

Another changing attitude in the United States is the tacit acceptance of growing dependence on imported oil. Until recently there was a highly politicized fear in the States of ever becoming more than 50 percent dependent on imported oil, even including Canadian imports. There is still talk from various special interest groups that our growing import dependency threatens our national security. But the official

position – while this might be true, the economic benefits of low cost foreign oil supplies outweigh the security risks and, therefore, nothing needs to be done to arrest this trend – is likely to remain the basis of our oil import policy. The government's misguided sale of a small share of our Strategic Petroleum Reserve for budgetary reasons is an indication of the downgrading of our national security concern.

Gas will clearly be the "fuel of the future" in stationary energy uses in both countries. It will also have a small but growing role in automotive fuels. The known North American resource bases can support the expected growth in gas demand well into the next century.

Coal was the principal source of electric power generation at the beginning of the 20th century and will have the same position at the beginning of the 21st century and probably several decades into it. It will also continue to be North America's only fuel with a net export balance.

Nuclear power was invented in the United States 51 years ago and is now being gradually phased out. There have been no new plants built for over 20 years and existing ones are gradually reaching the limit of their operable life span. The reason for the phasing out of this most advanced form of power production is largely public fear of accidents and the nuclear waste disposal problems. Had nuclear power maintained its projected growth of the 1960s, American coal production would by now be in a decline phase. But as we all have learned, projections and reality often have quite separate lives.

Footnotes

¹ Most energy forecasts in this article are based on projections by the Petroleum Industry Research Foundation, Inc.

OIL MARKET CONSULTANCY SERVICE

Dr. Mamdouh G. Salameh
Director & Chief Economist
World Bank Consultant
UNIDO Technical Expert

Spring Croft, Sturt Avenue
Haslemere
Surrey GU27 3SJ
England

Tel: 44-1428-644137
Fax: 44-1428-656262

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