

The Iraq War and the World Oil Economy

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Introduction

The invasion of Iraq has proved a disaster, one that was clearly foreseen. None of the reasons advanced for the action have turned out to be plausible, yet the administration evidently decided on this expensive and dangerous course early on. There are two stages in coming to terms with this: first to grasp what is at stake, second to understand the rationale for a *military* approach. We are not concerned with the second here. Our contention is that the first is far more complex and very possibly far more important than has generally been acknowledged in public discussion. Nothing less than the future management and control of the world energy market is at stake. It is not about who owns the oil; it is about who controls the market. In the transition from soon to be exhausted, non-renewable sources of energy, such as oil and gas, to alternative and renewable ones, the Middle East will play a crucial role. As a result it has become and will remain a major focus of conflict and diplomacy. We may all hope that conservation and alternative energy will eventually free the world from dependency on oil, but until that happens, the Middle East will be the central source. Yet, this, as we will argue in our final section, also opens up a new perspective for the Middle East.

Oil Imports and Oil Reserves

In our previous paper in *Constellations* we argued that the Middle East holds the key to the advanced world's energy needs now and for the foreseeable future. The US and Europe both have large import shares of Middle East oil. Most significantly, the Middle East has the largest reserves in the world, and they are the *least intensively exploited*.

To put this in perspective, a quick review of the proven reserves of *conventional oil* will help. 'Conventional oil' means oil drawn from liquid pools in the ground, reached by conventional drilling, therefore excluding tar sands, bitumen, and exceptionally deep wells reached by new techniques.

The first thing to note is that there is no agreement about reserves. According to the BP Statistical Review of World Energy, June 2005, however, the figures and the ranking, in billions of barrels, would run like this: The top three are

--Saudi Arabia - 262.7BB (22.1%),

--Iran – 132.5BB (11.1%),

--Iraq – 115BB (9.7%),

But other estimates are different. According to the Energy Information Administration, Iraq has 125 BB, but it is suspected of having far more, perhaps as much as 300BB. Exploration using advanced techniques has not been done there since the 1960s, so unofficial estimates rest on preliminary work done by Iraqis with French and Russian help. Iran now claims to have made new discoveries after a long period without exploration. But its mature fields are declining rapidly. And as we shall see, there are disputes over Saudi figures.

Next come

--Kuwait – 99BB (8.3%), and

-- UAE – 97.8BB (8.2%)

But Kuwait borders Iraq and quite a large field lies under the border; this must be somehow shared between them. Next we have

--Venezuela – 77.2BB (6.5%) and

--Russia – 72.3BB (6.1%)

These are the leading producers and all are except the last two are in the Middle East, which also contains some smaller producers, e.g. Azerbaijan and Khazakstan.¹

The proven reserves listed above are all very large, but we will see that in the Middle East the level of production is lower in relation to the proven reserves than elsewhere in the world. Yet even at these levels the Middle East is a crucial supplier.

To see just how important it is, consider the following data taken from the *Energy Information Administration*, Jan. 2003. Total net imports of oil worldwide in 2002-2003 were 24 Mill barrels per day. The US accounts for roughly 40% of this figure. The OECD Europe is next. In terms of percentages, (see the figures in brackets in the Tables), the US import share from the Middle East is lower, 20,2% as opposed to 35,9% in OECD Europe. As can be observed, for the US, the largest fraction of imports comes from Saudi Arabia. (As we shall see, this may pose a problem for the future). Saudi Arabia in fact is the largest source of oil for all the major OECD countries, and also for OECD Europe. For the US, however, a considerable fraction of imports comes also from Venezuela, which exports nothing to OECD Europe.

¹ Neither the definition of 'proven reserves', nor the techniques of measurement, are beyond dispute. For example, Venezuela and Canada both have relatively large reserves of unconventional oil – Venezuela of bitumen, Canada of tar sands (the two are similar). Counting its bitumen Venezuela's reserve may come to over 300BB, putting it ahead of Saudi Arabia; Canada's reserves of conventional crude are small but counting its tar sands, it reaches over 175BB. But bitumen and tar sands are expensive to process and the technology is difficult and not yet free of bugs. It's worth remembering that oil can be extracted from granite – it's expensive, you don't get much oil, and you end up with a lot of rubble. Tar sands are a lot better than that, but the big claims should be taken with a pinch of salt. The same holds for bitumen. Neither of these suppliers is likely to challenge the Middle East.

Table 1: Oil Import Share

	Persian Gulf/Middle East	Iran	Iraq	Kuwait	Saudi Arabia	United Arab.Emira-tes	Venezuela
U.S.	2,25	0	0,32	0,22	1,68	0,012	1,32
[% of imports from]	[20.20]	[0]	[2.88]	[1.98]	[15.11]	[0.11]	[11.87]
OECD Europe	2,56	0,74	0,58	0,09	1,13	0,04	0
[% of imports from]	[35.96]	[10.39]	[8.15]	[1.26]	[15.87]	[0.56]	[0]

This shows that the Middle East is currently important, as is well known. But additional significance emerges when we look not only at the shares of imports from the Middle East, but at the annual production, in relation to the remaining reserves and the time to exhaustion.

Table 2 summarizes world oil reserves, the ratio of production to reserves and time in exhaustion (in bracket). Here the figures are from the *Energy Information Administration*, Jan. 2003, so they differ somewhat from those above.

Overall, we can see that roughly two thirds of the world's proven reserves are in the Middle East. To see how unbalanced this really it, note that 25,7% of world reserves (and roughly 40% of Middle East reserves), are in Saudi Arabia alone! Iraq, second in line (and, rumour has it, possessing even larger reserves than shown here), has a share in world oil reserves of about 11%.

The first row represents the proven oil reserves, which of course, depends on detection and exploration technology and related matters. In the row in brackets, we can see the share of each country's or region's oil reserves as a percentage of total world oil reserves. The numbers in brackets denote the percentage of the world total. In the second row the ratio of annual production (obtained by multiplying the second column by the number of days per year) to reserves are shown and in brackets the time to exhaustion.

Table 2: Oil Production and Oil Reserves

	World Total	OPEC	Persian Gulf/ Middle East	Iran	Iraq	Kuwait	Saudia Arabia	Unit. Arab. Emi- rates	Vene- Zuela	U.S.	Russia
Reserves (2001) (Billion Barrels)[% of world total]	1.017,73		662,48 [65.09]	99,08 [9.74]	115,00 [11.3]	98,85 [9.71]	261,65 [25.71]	62,82 [6.17]	50,22 [4.93]	21,50 [2.11]	53,86 [5.29]
Ratio of Production to Reserves (2001) (annual production/ reserves)	0.024 [41.6]			0.0123 [81.3]	0.00073 [140.1]	0.00067 [149.1]	0.0104 [96.1]	0.0117 [85.5]	0.0189 [52.9]	0.057 [17.5]	0.047 []

If we take the total oil reserves in the US, proven and unproven, at the current rate of extraction of oil through annual production, they will not last for more than a couple of decades.

Taking world oil reserves as a whole, at current rates of production there are more than 40 years left before exhaustion. Considering individual countries at their present rates of production, for Iran there are 81 years, for Iraq 140, for Kuwait 150, for Saudi Arabia 96, and for the United Arab Emirates 86.

Venezuela has 53 to run, but, as stated, the US has only about 18 years left before the exhaustion of its oil reserves.

The important point is that the Middle East oil resources—in particular those in Iraq-- are very much underexploited. That is why the time to exhaustion in Iraq is very long. Table 2 in fact underlines a major geopolitical problem: on the one hand, the reserves of the advanced economies are rapidly shrinking and thus *overexploited*, while, on the other hand, those of the Middle East are both much larger and significantly *underexploited*.

Of course, as we all know, the exploration and production technology for oil is continuously changing, more rapidly than ever nowadays. This is the result of the so called “DOFF” – the ‘digital oil field of the future’. The DOFF is based on information, exploration and control technologies, which nowadays makes exploration and production far more exact and targeted. Recently, estimates of the recoverable reserves in Alberta, Canada, and Venezuela have been greatly increased by counting unconventional sources. The resources are now deemed recoverable because there have been great advances in the technology of processing tar and oil sands. Furthermore new oil explorations for example, in the Gulf of Mexico and in Colombia, have come up with significant new findings.

However, the costs of recovering petroleum from oil sands may prove daunting; almost as much energy must be used in processing as the final product will contain! Moreover, the processes generate severe pollution. The new strikes in the Gulf are in exceptionally deep waters and have already run into problems. Finally, all new unconventional oil will be expensive and it will be some time before any comes on line.

In any case, rapid advances in oil exploration and recovery are possible in all oil rich regions, and perhaps in particular for underexploited oil potential in the Middle East. In addition, adding to its attractiveness, Middle Eastern oil is still much cheaper to produce. In fact the new unconventional sources may prove less attractive than the new findings in Kazakhstan, Azerbaijan, and the Caspian area, which are conventional oil. The magnitude of these findings is still unclear, but the Caspian is part of the Middle East, and the governments face many of the same political problems as elsewhere in the region, so exploiting this oil may not be so easy.

To sum up: in the US, oil, natural gas and coal together provide about 82% of all energy, and oil and gas roughly two thirds. Two thirds of the world's proved oil reserves are in the Middle East. In the US, Mexico and Venezuela, and less so in Canada, the remaining years to exhaustion of the known oil resources are only one fifth of the years to exhaustion in Middle East.

Declining World Supplies and Iraqi Reserves

Modern economies are knowledge based, but they are also energy based. Knowledge can be produced – but energy has to be secured as well as produced. The Middle East is the world's premier source of energy, and it is far from secure. Of course, there could be a shift to renewable sources, but it will take energy to make this shift. If China and India, let alone the rest of the Third World, are to be brought up to a decent standard of living, consumption of fossil fuels will more than double. Then an additional substantial increase will be needed to move the world from fossil fuels to renewable energy. US production peaked in 1971, as Hubbert had predicted; Texas oil production has been reduced roughly by half since 1980. World oil production from conventional sources arguably peaked around the year 2005, at around 25 billion barrels. Some estimates claim that conventional oil will decline to less than 5 billion barrels in the years before 2050. But the Middle East reserves provide the only

hope for conventional oil; the estimates above suggest they will last much longer (Long Term World Oil Supply, EIA, 2003) .

Dick Cheney, speaking at the Autumn lunch of the London Institute of Petroleum, Nov. 15, 1999, commented:

“By 2010 we will need on the order of an additional fifty million barrels a day. So where is the oil going to come from? ... While many regions of the world offer great oil opportunities, the Middle East with two thirds of the world's oil and the lowest cost, is still where the prize ultimately lies.”

Iraq, as noted, is widely suspected of having huge, although unverified, reserves. Taha Hamad Moussa, formerly Saddam's Deputy Oil Minister, has claimed that when full exploration is carried out, Iraq will be found to have reserves of over 300BB, significantly greater than those of Saudi Arabia. The Petroleum Economist Magazine has suggested that as much as 200BB additional will be found². The Council of Foreign Relations and the James Baker Institute at Rice University estimate there will be additional discoveries of 220BB³. These potential reserves are believed to be high quality and easily exploited – the cost of producing a barrel is expected to be about \$1.50 – or less. In addition Iraq has extensive reserves of natural gas, at least 110 Trillion cubic feet.

Indeed, the oil reserves of the Middle East will be needed to provide the energy for the transition – which can only be done once. For the non-renewable resources, at least the easily accessible ones, will most likely be used up.

² In an article entitled “Iraqi Sunni Lands Show New Oil and Gas Promise” NYT, Mon, Feb 19, 2007, it is claimed that just one series of wells in Sunni lands near Baghdad raised the level of recoverable reserves by 15BB. The article quotes speculation by ‘Western oil experts’ that as much as 100BB of additional crude ‘could be found in deep formations in Anbar’. In addition there appears to be a great deal of natural gas, not presently counted in Iraq's reserves.

³ The US Geological Survey, however, casts doubt on all these estimates. First it contends that Iraq's original reserves have been seriously depleted, so that its current reserves should be marked down to 78BB. Second it contends that it is unlikely that new finds will be large – it gives Iraq a 95% chance of finding 14BB additional, only a 50% of discovering 45BB, and a mere 5% chance of 84BB. But this position has been criticized and apparently is not widely shared in the oil community. For one thing, Iraq has 80 identified oil fields, but has only exploited about 20 of these, whose total recoverable resources account for no more that 40 BB. To mark Iraq down to 78BB would require assuming that all these currently operating fields have not only peaked – they would have to be exhausted. This is simply not the case.

Basically, the world has *one chance* to make the transition from an industrial civilization fuelled by fossils to one based on renewable energy. It will need all its present reserves to make this transition. The Middle East has two thirds of the world's reserves – and it is not only, as we see now, increasingly unstable, but also increasingly anti-Western.

Geopolitical Risk and the Uncertainty of Oil supply

Information is often hard to come by in the oil business. Even something as basic as the current and foreseeable balance of supply and demand in the oil market cannot easily be defined – it depends on how the various versions of the peak oil hypothesis are to be assessed. This requires some care. The idea behind the ‘peak oil’ hypothesis is simple enough: given finite deposits of a natural resource –oil, say, or copper – before we begin exploiting it the rate of production is zero, and after it is exhausted it will again be zero. In between the rate of production will rise, at some point it will peak, and then fall back towards zero. We will start with those deposits that are most accessible and easiest to exploit; as we invest, the rate of production will rise, and as infrastructure is developed the rise will accelerate. But sooner or later we will exhaust the easily managed deposits, and will have to turn to more difficult ones. At this point the rate of increase in production will slow down – and eventually stop rising. This is the peak. After this, the rate of production will fall, first slowly, then faster, then gradually sinking to zero. The first proponent of the hypothesis suggested that the peak was likely to occur very near the middle. The resulting curve somewhat resembles a so-called ‘normal’ distribution curve, with exponential upswings and downswings, and can be expected to look something like this⁴:

⁴ Technically, Hubbert's Curve is the derivative of the logistic curve; it is symmetric, with a single peak, located in the middle. That is, the peak rate of production is reached when half the resources have been extracted. The area under the curve, the integral, represents the total recoverable resource.

There is some leeway in the ‘peak oil’ hypothesis, depending on the relation between the rate of extraction and total recovery; in many cases extraction can be speeded up, but if it proceeds too fast, total recovery will very likely be reduced, because the pressure in the well will fall too low, or too much water will be pumped in, (water to replace the gas that provided the initial pressure), so that it will become impossible or excessively expensive to pump further⁵.

Initially the peak oil hypothesis was proposed as a way of understanding the management of specific deposits. But even at the outset it was argued, by its original proponent, M King Hubbert, that it applied to entire nations, and even to the world as a whole. For the deposits of a nation are finite, and will be exhausted some day. The rate of production rises at the beginning, as the most accessible deposits are exploited first. As infrastructure is developed, the rate of production will rise rapidly. But then these deposits will become exhausted; but new ones will be more difficult to find, and when found, more expensive and troublesome to operate. Hubbert, in 1954, to great derision from many in the oil community, predicted that the U.S. would peak ‘between 1965 and 1970’. Few believed him, and in 1971, the rate of production in the US from conventional oil exceeded the rate in 1970. But in spite of the oil crisis in 1972 and 1973, US production fell. It soon became clear that the US peaked in 1971. As for the world, most proponents of the thesis argue that the world will peak sometime between 2005 and 2010. Two of the three largest fields in the world have peaked. In November 2005, Kuwait announced that its giant Burgan Field had entered depletion, and in March, 2006, Mexico let it be known not only that its giant Cantarell Field had peaked, but that because of past overproduction, its output was declining at a rate of -13% per year. It has been claimed that production is decreasing at -8% per year in some major Saudi fields.

⁵ Some producers, notably Iran, with extensive supplies of natural gas, pump it in to declining oil fields to increase the pressure, improving the rate of oil production, but at the expense of wasting gas.

If, indeed, we are approaching or have passed, the point of peak oil production, worldwide, then we have to expect rising oil prices as far ahead as we can project – and further down the line, even oil shortages. But if peak oil is a myth, we can expect production to be jacked up, exploration to bring new supplies, and new technologies to develop oil from unconventional sources at competitive prices. On this view, eventually, prices will fall, and it may even happen that shortages will be displaced by surpluses. Or, perhaps, there are positions in between – it may be that some producers, e.g the US, have indeed peaked, and are on what is very likely a permanent downhill path. Others, however, may still have a long way to go before they peak.

New supplies will very likely come on line, but at a higher price. New technologies may be needed, and will initially be costly, but economists tend to believe that ‘learning by doing’ will eventually bring down the costs, e.g. of tar sands and bitumen. Yet this may be too optimistic. There is some evidence that the technologies for extraction and processing tar sands may not work very well – the energy input into the extraction and processing may be nearly equal to the energy value of the final product.

But there are even more urgent issues, and they concern the Middle East: what about Saudi Arabia? Is its great field at Ghawar, the largest field in the world, over the peak? This has been claimed, and, officially denied. But what is the evidence? It has been claimed that the North part of the field has been overworked, and is now in decline – yet historically Ghawar has accounted for more than 50% of Saudi output. The Saudis have not announced any new fields of comparable size to fill in as it declines. Even worse, most world oil scenarios assume Saudi output will be increasing and that this is necessary if new demand, e.g. from India and China, is to be met – yet the claims about Ghawar suggest

there may be problems down the line even in maintaining present levels of extraction.⁶

And what about Iraq itself – are its fields being mismanaged and thereby irretrievably damaged? Iraqi production is down from prewar levels, that in turn were down from prior to the Gulf War. Iran is also down from its high of nearly 6 in the late 70s, due to damage suffered in the Iran-Iraq War, though it has recently gone up from 3.5 M bpd to a little over 4. But has been suggested that lack of investment, and perhaps lack of expertise, in Iran is leading to a degree of mismanagement that will seriously reduce the level of final recovery from the fields. Finally we know that Kuwait was damaged; how badly, how much of its reserves will now prove difficult or impossible to recover?

What Moves the Oil Price ?

Prices, marginal producers and rents

First, of course, what is the price based on? Basic economic principles tell us that in the long run, prices of natural resources cover costs and a ‘normal’ return (or perhaps a ‘supernormal’ one, if there is some kind of monopoly power) for the *marginal producer*. The marginal producer will be the highest cost producer. Everyone else will earn ‘Ricardian’ rents.

Think of agriculture: farmers have to make a basic living, a ‘normal’ return. But some lands are better than others; poor lands, however, won’t be cultivated unless a basic living can be earned on them – so prices will have to rise to a level that provides a living on those lands. The demand curve for food will

⁶ In the NYT March 5, 2007, Dr N. G. Saleri, head of reservoir management for Saudi Aramco, is quoted as claiming that “Saudi Arabia’s reserves [are] almost three times higher than the kingdom’s officially published figure of 260 BB ... He estimated the kingdom’s resources at 716 BB, including oil that has already been produced as well as more uncertain reserves.” Much of this will be heavier oil, in deeper and more difficult wells, and so more expensive to extract. And much of it will come from wells that are ‘exhausted’ by today’s standards and will only be extractable with new technologies – some of which have not been proven yet..

show how much food is needed for the cities at each price level. Cultivation will be extended to poorer and poorer lands and prices will rise – leading demand to fall - until a price is reached at which demand is just met by the expanded supply at that price. The ‘marginal demand’ will be supplied on land that is so poor that farming it just yields a basic living. But all better lands provide crops at lower cost, so also yield ‘rent’.

This is surely oversimplified, and there are certainly other issues⁷. But it is at least part of the story, and it allows us to raise an important question. For this approach suggests that high cost producers in the US and the North Sea should earn a ‘normal’ return, while low cost producers in the rest of the world, especially the Middle East, will earn ‘rents’. But we saw earlier that Middle Eastern oil is *less intensively exploited*. If the production of oil were governed by purely economic principles, it would follow the model above: poorer lands, implying high-cost farming, would be brought into production only if there were unsatisfied demand after better lands had reached their maximum output or became exhausted. Prices would rise to cover high-cost production *because low cost producers could not satisfy the demand*, requiring that poorer land be brought under cultivation. This implies that if oil followed the pure economic model, no high cost oil would be brought into production until supplies of lower-cost oil were exhausted sufficiently to raise the cost of further extraction to a level where high cost wells would be competitive. The US, the UK and Norway would probably not be producing oil at all; specialized ‘niche’ production might take place, but the large scale, high output wells, producing oil for the big refineries, would all be in the Middle East.

⁷ Hotelling, 1931, and others following him, famously argued that besides marginal cost, the price of a non-renewable natural resource had to include an element of scarcity rent, and that this last had to increase over time at a rate equal to the rate of interest. Intuitively, efficiency requires that units can be extracted at any time; but since the rents yielded by any units can be invested and grow at compound interest units left in the ground and extracted later must yield an appropriately larger rent than those extracted earlier. This, of course, is an optimizing argument and does not purport to tell us how things actually work. A different and perhaps more useful approach would seek to determine the optimal proportion of revenue to invest in order to convert the non-renewable resource into permanent capital yielding the same stream of consumption. This is relevant to the development of Oil-Based Investment Funds, as in Norway, Alaska, Oman, Kuwait, and elsewhere.

Clearly that is not how things work. Prices are indeed set so that high-cost producers earn normal returns, and low-cost producers earn rents in addition, but it is *not* the case that high-cost producers only enter the market because low-cost producers cannot meet the demand. On the contrary, the output from low-cost producers is severely constrained, for many overlapping reasons.

Indeed, as we saw, this is one of the distinguishing features of the oil market. Part of the reason may lie in the different legal systems. In the US ownership rights generally extend to subsoil mineral rights, but in most oil-producing countries, subsoil rights belong to the community and are controlled by the government. Private development driven by the profit motive was easier and faster in the US, though profitable businesses emerged quickly enough in Russia and Romania.

A major reason stems from history: oil was developed first in the US, and when production initially emerged in the Middle East, e.g. in Azerbaijan⁸, it was not that much cheaper. Nor was oil easy to transport, so there was not yet a world market. By the time really inexpensive, high grade oil was discovered – in Iraq, Iran and Saudi Arabia – and transport systems had been put in place, the advanced technology was concentrated in the oil companies, and concession and contract arrangements were being made or supervised by governments in the light of their strategic concerns. This was necessary because it was certainly not prudent, and in some cases not possible without heavy losses, to cap the oil wells in the advanced world and allow world production to be concentrated in a backward and politically unstable region. Given the political uncertainties, governments could not rely on strategic supplies from the Middle East, nor would companies want to bet their future on its cheap oil. As a result both

⁸ In fact, a Russian engineer, V N Semyonov, drilled the world's first modern oil well, 70 feet deep, at Bibi-Heybat, just south of Baku, in 1844, fifteen years before Drake's well in Titusville, PA. Kerosene was refined from the Bibi-Heybat well, but both Russians and the local government declined to invest. It was not until the late 1870s that Alfred Nobel and his brothers developed the oil resources of Baku.

governments and companies have managed the market over the last half century⁹ so that high-cost producers in the advanced world would supply a sufficient portion of demand at an adequate price.

Fluctuating prices today

The price of crude oil roughly tripled from the beginning of the Iraq war. It rose from about \$25 before the Iraq war to a recent high of \$78. Now it has been decreasing again, to below \$60 – although at the time of writing it has begun once more to rise. The fuel at American gas stations roughly doubled during that period. Is the price of crude oil going to rise strongly again? Will it go as high as \$100 in the near future? Or will it fall back, say to around \$40, as new supplies come on line, as some oil economists think?¹⁰

What moves the oil price in the long run, and what makes it so volatile? There are short run and long run factors at work, and these factors can be real or financial. Finally in addition to market forces there are policy pressures, on the one hand from OPEC, seeking to push prices up or keep them from falling (by restricting production), on the other from Saudi Arabia, in consultation with the US and the West, limiting and constraining price rises (by pumping additional oil).

Overall, the price of crude has moved in cycles since the 1970s. The first big increases were in the first and second oil crises 1973 and 1978, building up to an oil price of roughly \$35 at the beginning of the 1980s. The real oil price --- the nominal oil price adjusted for inflation---at its recent high point had roughly reached that level, i.e. the peak at the beginning of the 1980s.

⁹ Blair, 1976, shows in great detail how from the end of World War II to the first Oil Crisis, the companies coordinated production worldwide, so as to manage prices with great precision, ensuring the desired development of markets, and also arranging for the realization of profits so as to minimize tax exposure. (Prices would be arranged so that profits would be realized in low tax countries or jurisdictions.) Prior to World War II, oil was coordinated on the basis of the famous (infamous?) Achnacarry Agreement of 1928, between Royal Dutch Shell, Standard Oil and Anglo-Persian (predecessor of BP).

¹⁰ We were given an account in July 2006 of internal BP estimates. The NYT March 5, 2007, reports that OPEC “has coalesced around a price of \$50 a barrel for oil...”

Yet at this time the oil price does not seem to be too threatening. Many energy saving measures have reduced the ratio of oil to GNP. In particular in Europe such measures have reduced the energy to GNP ratio to half of what it was in the 1970s. Further measures have just been announced that will reduce the ratio even more. But conservation has moved much more slowly in the US.

In the view of many observers, however, the price of oil seems likely to trend upward in the long term. And, as noted, it swings about with a good deal of volatility. What explains all this? There are a number of theories – as we might expect. In the 1970s and 80s the oil cartel, OPEC, was blamed for the oil price increase. According to this perspective the main cause for the price increase in the 1980s, was the power of the OPEC oligopoly to set prices by restricting supply. Obviously OPEC is important; but does cartel power explain what appears to be the long term upward trend in the oil price? It seems unlikely, since the cartel frequently shows signs of internal stress – and its largest member, Saudi Arabia, is usually careful to keep its actions within bounds acceptable to the US.

So, in the 1980s and 1990s, many have, instead, pointed to the fact that the world has finite energy resources, which are rapidly being depleted, and that further exploitation of these cannot keep pace with the rising demand. In the 1990s the growth of the US was high--- 3.5 to 4%-- with high demand for oil and gas. The growth rates in Europe were below 2 %. At the beginning of 1990s first the US growth gave rise to high demand for energy and this drove up the oil price, yet, at the end of the 1990s the oil price was again down below \$20 per barrel of oil, since Europe was in a long term slump. Asian countries, in particular China, started an economic take off with growth rates of 8 to 10 % with increasing demand for energy such as coal, gas and oil. The oil price started slowly rising due to growth in Asia (China and India) and in particular in the pre-war period 2002, prices went up from the low 20s to the low 30s right at the

beginning of the Iraq war. Including the build up period to the Iraq war in 2002 the oil price has more than tripled.

On the other hand there are long run swings and short term volatility of the oil price. Economists have pointed to the fact the demand for oil is very inelastic – and the supply is rather rigid. If there are slight shocks to the oil price, like labour unrest, or hurricanes that threaten oil platforms, or fires, or, perhaps worst of all, geopolitical risks like war or revolution – particularly in the Middle East—the effects may be large and dramatic. Small changes, or threatened changes, in oil supply will cause huge price increases. This relationship between steeply inelastic demand, especially in the short run, and rigid supply appears to explain the huge volatility of the oil prices. Small shocks can cause huge jumps.

Yet, there is another possible explanation, one that has recently gained popularity and offers a different account for the wide swings in the oil price. This suggests that the price of oil depends in part on modern financial markets. In the Wall Street Journal an article appeared with the title “High Oil prices Create Investment Opportunities”. In recent times the best stocks have not been only those of the large oil corporations (whose rate of return in the last few years rose to 40 and 50 %)---but also *oil derivatives in futures markets*. In such markets the trade is not in real barrels of oil, but, instead, “paper barrels” are bought and sold. Speculators anticipate a rising demand and the oil price rises (see Morgan Stanley report, July 14, 2005). One buys today, what we believe China wants to buy tomorrow. The total assets invested in future markets rose from \$40 to \$140 billions, in the years from 2000 to 2006.

In the market for oil these derivatives play a role in determining asset values – values of shares of companies, or of claims to future oil. Prices are being driven up by a tremendous inflow of financial funds into the future markets. But this is a self-feeding process: the massive inflow of funds buying oil derivatives come in part from high oil prices and from the income generated in the oil business.

Moreover, given the low interest rates in the last five years, borrowing was cheap and so hedge funds took risky betting positions, with their purchases driving up the price of oil. Now some of these hedged funds have learned that lesson – what goes up can come down, and they have failed – and oil prices have fallen further. In short, the high oil price reflected not only the usual factors - high world growth rates, new demand for oil by India and China, and the geopolitical risk in the Middle East - but it also reflects the asset price bubble in “paper barrels”. And the possibility of this happening, in turn, is largely based on the huge informational problems and uncertainty in regard to the oil supply.

Stabilizing the Oil Price

So oil prices current reflect supply and demand, where, in the short run, demand is inelastic and supply tends to be somewhat rigid. In the long run both have more flexibility, but only at some considerable cost. Under such conditions, a small change in either demand or supply is likely to have a large impact on prices. This is then compounded by the volatile activity of speculators in the futures market.

Given the importance of energy in the economy, such instability produces risk for the whole economy. Ever since the 1970s the price of oil has been kept within bounds, and its fluctuations damped down, by the willingness of the Saudis to pump oil, in effect at the behest of the US. If oil rises because of a surge in demand, or if it rises because OPEC cuts back supply, the Saudis have been willing to bring it back into the acceptable range by pumping and throwing additional supplies on the market. In effect, the price of oil has been kept in acceptable bounds by negotiation between the Saudis (who have to keep OPEC in mind) and the US, representing the West, with the Saudis often ending up putting pressure on OPEC. Many economists do not like this way of describing

the situation, preferring to give more of a role to the forces of the market. But, in our view, that is impossible; the configuration of supply and demand means that the market is inherently unstable, and is incapable of setting a steady price.

Now think back to the ‘peak oil’ hypothesis. Even if a field or country still has large reserves, once it has peaked, it cannot increase its rate of production, which, in fact, will tend to decline. A recent book by a Houston oil man, who served as an advisor to President George W. Bush, Matthew Simmons (*Twilight in the Desert*) argues first, that the great Saudi oilfield Ghawar may have peaked recently, and second, that Saudi Arabia as a whole is about at its peak. Its other main fields are mature, and there have been no significant new discoveries for decades. The implication is that Saudi Arabia cannot for much longer play its role in stabilizing and keeping prices within acceptable bounds¹¹. Notably, the Saudis were not able to prevent the enormous surge in oil prices of the last few years; they claimed they could substantially increase production, but they have not yet been able to do so. Even if large new fields come on line, they must offset rapidly declining production from mature fields.

There is another aspect to this. Saudi Arabia is in many ways, a ‘failed state’. (Bradley, 2005). The official religion, Wahhabism, is, as Bradley and many others have shown, a crude and literal-minded fundamentalism, oppressive to women, and antagonistic to science, indeed, generally opposed to liberal thinking and modern life. It also leads to severe repression of Shiites, several million of whom –perhaps 15% of the total population – live chiefly in the oil-rich Eastern Province. These Shiites have long been the subject of discrimination and repression; only since the 1990s has there been any effort to

¹¹ Needless to say this thesis has been criticized strongly, for example, by [redacted] and [redacted]. Their critique, however, strikes us as largely nitpicking; the issue is not whether the Saudis are accounting properly for their reserves, but whether they can raise production enough to keep prices down to an appropriate level. Simmons’ thesis is that they will not be able to significantly increase production above the maximum rates they have currently reached. On the other hand, in conversation, senior officers of BP cast doubt on this, arguing that no matter how secretive the Saudis try to be, there are so many Westerners working in senior positions in the Saudi oil industry that if Ghawar, let alone Saudi production in general, were peaking it would be widely known, in detail, in the West.

bring them into the life of the kingdom. This may be too little, too late. It is believed that Saudi Shiites have formed connections with Shiites in Iraq and Iran. Wahhabism opposes modernization in virtually all forms, and represses intellectuals as well as women. There is widespread unemployment and under employment, especially among young men – few women work. This leads to widespread apathy. For all menial jobs there are imported guest workers, nearly eight million of them. The darkest secret is the wide prevalence of mental illness, particularly among women (Bradley, 2005, p. 174). Wealth is concentrated in the small ruling family that has kept a monopoly on virtually all important centers of power and influence. But there are deep splits in the ruling family, chiefly between pro-Western modernizers, and traditionalists.

A case can easily be made that this country is likely to implode, or break apart. The splits in the ruling family could widen and lead to open conflict between modernizers and traditionalists. This could perhaps be contained, but much worse possibilities exist. The Shiites could rise in rebellion and be assisted by Iraq and Iran – leading to a huge war. Fundamentalist Sunnis, sympathetic to Al Quada, could rise in rebellion, and possibly seize parts of the country, leading to civil war. There are non-fundamentalist, and anti-Wahhabist Sunnis; many of these are well-to-do and strongly opposed to the policies of the monarchy. There are strong anti-monarchist sentiments. Any of these groups could rebel, and many have.¹² In any of these conflict scenarios, control over the flow of oil would be a crucial prize, so that oil facilities would be likely targets. The result of a civil war in Saudi Arabia could easily be a serious disruption of world markets¹³.

¹² In the capital of al-Jouf province, Sakaka, on the border of Iraq, high officials were assassinated in recent years, and members of the leading al-Sudairy clan of the Saudis were threatened. In the Hijaz leading merchant families attacked Wahhabist clerics. There was a Shia revolt in Najan near the border with Yemen. There have been many other outbreaks of violence and disaffection.

¹³ This, of course, is an important reason for stationing US troops either in the Kingdom or nearby in the Gulf. But US troops would not necessarily protect the monarchy; indeed, it has

Invading Iraq

If in the near future Saudi Arabia might find itself no longer able to manage the oil price, for whatever reason, the US, as leader of the West would naturally be worried. And if Iraq very likely has huge unverified but easily exploited reserves, it would make sense for the US to wish to bring those resources into play, to fill in for the Saudis. However, Saddam stood in the way. He detested the English and the Americans, and sought to cut deals with the French and the Russians, eventually signing contracts with both. He invited oil experts from 30 countries to examine Iraq's potential, but included none from England or America – which cut out the four largest majors, Exxon-Mobil, BP, Shell and Chevron. The contracts with French and Russian companies could not be put into practice, however, because sanctions were imposed on Iraq – indeed, preventing the development of Iraq's oil by French and Russian companies may have been one of the chief purposes of the sanctions.

Three reasons are usually given for the invasion of Iraq.

--First, there was the widespread belief that he had or was developing WMD. It has become increasingly clear that there never was a solid basis for this belief, and that the intelligence community was sceptical of most of the alleged evidence. It is possible, therefore, that this was not a genuine reason, but rather an excuse, advanced in order to obtain assent to an invasion desired on other grounds.

--Second, it was argued, on good grounds, that Saddam was a monster, a ruthless dictator and a killer. True enough, but many others supported by the US (as Saddam himself was at one time) have been as bad, or worse. Think of Mobutu, Jonas Savimbi, Somoza, Pinochet, ... Even Mubarak in Egypt, one of

been suggested that in suitable circumstances the US might be pleased to see the breakup of the Kingdom.

the largest recipients of US aid, has a terrible record on human rights. Saddam was monstrous, but his regime supported the rights of women to an extent unparalleled in the rest of the Arab world (compare Saudi Arabia); it made education and health care widely available, and when it was not torn apart by war, it ran a dynamic economy. It provided security and imposed law and order on a society perched, as we see now, on the brink of chaos – into which we have seen it fall.

--Finally, after no WMD were found, it began to be argued that the real purpose of taking over Iraq was to create a prosperous pro-Western democracy, a state that would serve as a showpiece for modern, Western values – and which could allied to Israel. There is some truth here; the administration did seem to think that once Saddam was removed, it would be easy to set up a compliant pro-Western government. But that is not the same thing as democracy.

So – Saddam may have been a monster, but we have supported worse, and his regime arguably had some reasonably good features. Indeed, in 1982 the Reagan Administration removed Iraq from the State Department's list of countries that supported terrorism, making it eligible for military aid.

This suggests that the real charge against Saddam was not his cruelty and oppression, but his refusal to open Iraq's oil resources to the US and UK majors. It was believed that once the oil began to flow again, a new pro-Western government would have enough money to create a prosperous society. However, this was a subsidiary ambition; the main aim was to establish control over the oil, in order to modernize the oil sector and carry out extensive exploration, with the ultimate aim, (if the amount of oil turned out to be as large as believed), of *setting up Iraq as the new Saudi Arabia, the regulator and stabilizer of oil markets.*

It is notable that from the start, the US and the UK gave special attention to the oil sector (the Oil Ministry was the only Ministry protected by US troops during and after the invasion.) In the discussions concerning the drafting of the new Constitution, the US strongly backed ‘Production Sharing Agreements’ (PSAs) – even as the ones Yeltsin signed were being repudiated by President Putin of Russia. No other Middle Eastern country has such arrangements; such agreements are widely regarded as unfair and exploitative, for good reasons: PSAs firmly lodge control of both output and pricing in the hands of the companies; profits are shared between the companies and the state *after* the company has deducted its costs. The company controls decisions over the rate of output and how to exploit the fields. Exploration and investment are controlled by the companies. Agreements are for long periods, ranging from 25 to 40 years. Disputes are to be settled in international commercial courts. In effect, although the state retains ‘ownership’ of the oil fields, these agreements vest control in the companies – who are even entitled to list the fields among their reserves. (Muttitt, Hughes and Cronin, 2005)

Putting Iraq’s oil largely in the hands of the ‘big four’ and other Western companies would mean that the companies, rather than Iraq, would decide on the level of output. The companies will determine the level of costs. The companies will decide when and where and how much to invest. Of course there will be discussions and negotiations; but control and expertise will be largely in the hands of the companies. So the companies, not the Iraqi Government, will ultimately make the decisions that determine the government’s level of revenue from oil. And the companies would have to listen to Western governments. This would make it much more difficult for OPEC to control the price. This represents a complete about-face for Iraq, which for forty years has managed its own oil – and has done so as a matter of national pride.

This perspective also suggests explanations for otherwise puzzling aspects of the invasion of Iraq. It has always seemed strange that Tony Blair should have supported Bush's policy at great expense to his popularity, without receiving anything in return. But from this perspective, the poodle *was* being fed; the UK was put in charge of Basra, and BP would be allowed to negotiate for a Production Sharing Agreement. France and Russia on the other hand were excluded, and their existing contracts would not be honoured. At least, these have been the indications; at the time of writing, none of this has been finally settled¹⁴.

Another puzzle concerns the 'deBaathification' policy, firing teachers and civil servants simply for membership in the Baath Party, when it was well known that the Saddam government required such membership for many kinds of employment. It was a condition of employment for most teachers and civil servants; therefore, membership was purely nominal, and in no sense implied support for Saddam. Yet 'DeBaathification' was even extended to demobilizing the Army, throwing unemployed and angry men with guns into the streets. Most of the people dismissed were not supporters of Saddam, nor in any way guilty of his crimes. Moreover, they were obviously necessary to keep the country running. Their dismissal led to the breakdown of government services, and demobilization led to a breakdown of law and order. These effects were widely predicted, yet the Coalition Provisional Authority went ahead anyway - according to its chief, L. Paul Bremer, on orders from Washington. Even at the time, and certainly in retrospect, these were colossal errors.

¹⁴ The NY Times reported on Feb 27, 2007, that the main political blocs in Iraq had reached an accord on the law governing the management of oil. But it also reported resistance among Iraqis to PSA's and widespread fears among non-Americans that US companies will be favored over those of other nations. Corruption in the upper echelons of the oil ministry is said to be rife. The oil law and related measures still must be approved by Parliament, where ethnic and sectarian conflicts could lead to stalemate. The Kurds are unlikely to agree to any oil law until they have achieved control of the city of Kirkuk, (a referendum is scheduled for a year hence). Incorporating Kirkuk into the Kurdish region will give them control over most of the oil of Northern Iraq. Whatever the law says the Kurds are likely to go their own way, and pay it lip service at most. They have already entered into negotiations with a small Norwegian oil company.

From the perspective suggested here, however, it does make some sense: the Baath Party, the teachers and civil servants of Iraq, and the Army all were *strongly nationalistic*. All indications are that they would have strongly resisted privatizing the oil resources of the country, and turning control over them to Western companies. Dismissal deprived these nationalist voices of an institutional power base.

Saudi Arabia opposed the invasion as an attack on fellow Sunnis, and opposed the move to democracy in Iraq on the grounds that a Shiite majority would emerge, which would very likely embolden its own Shiites, leading to resistance and even a secessionist movement in its Shiite and oil-rich Eastern Province. But this did not bother some neo-conservative Pentagon thinkers; like some Israelis, they hoped that the development of Shiite democracy in Iraq would actually lead to the collapse of Saudi Arabia. In such a breakup, they foresaw Western Arabia becoming an Islamic Sacred State, protecting the holy cities, but having no oil, while Eastern Arabia, a Shia dominated state would have the oil, but no holy cities¹⁵. This line of thinking did not figure prominently in public debate in the West, but was widely discussed in the Arab press. If Iraq held together it would be Shia dominated, and as a fledgling democracy, would be dependent on the West. If it had to be partitioned, that would be fine, too; the Shia south could then join with the Saudi East, either constitutionally in a rich and prosperous Shia democracy, or less formally, in one or another kind of alliance.¹⁶ Either way the log-jam of the Middle East is broken up, and two

¹⁵ Richard Perle, in 2002, still head of the Defence Policy Board, is said to have advocated a military occupation of the Eastern Province oil fields. Robert Fisk, *THE GREAT WAR FOR CIVILIZATION*, pp, 1112-3 cites Israeli hopes for the breakup of Saudi Arabia following the invasion of Iraq.

¹⁶ Ralph Peters in an article, "Blood Borders" in the *Armed Forces Journal*, of June 2006, has even argued that the oil-rich and partly Arab province of Khusestan, bordering Iraq and running down the Gulf (including Kharg Island) could be split off from Iran and added to the Shia state. He also wants to create a full Kurdish state, adding parts of eastern Turkey, eastern Syria and northern Iran to the present autonomous Iraqi Kurdistan – granting it the oil of Kirkuk. These two new states would owe their existence to the US and could therefore be expected to be loyal allies. Loyal allies of the US in the Middle East? 'Redrawing borders' by means of military power is a dangerous fantasy. (In the New York Post on Saturday Feb 17, in a front page Headline article, Ralph

terrible failed states are removed. In some ways it is hard to take this kind of thinking seriously – but it should be, for it has been part of the discussion in decision-making circles.

The invasion of Iraq has proved to be a disaster, worse than we suggested it might be in our earlier article. It was a mistake from the start, as many of us argued at the time. The initial reasons for the decision have turned out to be without foundation, and the later rationales are simply not believable. Yet we want to argue that while military action was foolish the underlying motivation had some logic to it.

Given that oil is likely to run out soon in the West, the reserves of the Middle East will have to support both the advanced world, and the newly industrializing world. The three-part question that must be faced is: What is the best way of securing sufficient reserves to permit economic advance in the as yet underdeveloped world, while still allowing the continued prosperity and growth of the advanced countries, and at the same time encouraging the development of alternative energy sources? This is a complicated question, all the more so, because a large part of any possible answer is trapped in the tangle of Middle East politics. No responsible leading government can ignore these issues. Military action was never warranted, but a creative diplomatic initiative would have been.

These issues are surely among the most important facing economic policy-makers today. Yet not only were they never raised, the issues were absolutely suppressed in the discussions concerning Iraq. “It’s not about oil!” was the mantra, repeated over and over. Attention was directed away from oil. Until recently conservation and alternative fuels were outside the Administration’s

Peters accused the Democrats in Congress of *treason* for voting a non-binding resolution condemning the ‘surge’.)

field of vision. Cheney famously argued that conservation was a private matter, not a public issue. And the fiction was maintained that oil prices were set by market forces – except, of course, for the efforts of OPEC to interfere. The possible or likely near-term weakening of the Saudi ability to control prices was never mentioned - not even when prices skyrocketed.

It may well be that the ultimate disaster of the invasion of Iraq is that it will have created such terrible antagonism as to make it impossible, at least in the near term, for the West to achieve what we think may have been the underlying goal –ensuring that the supply of oil would be in friendly (or at least neutral) hands and provided at a reasonable price for the foreseeable future.¹⁷

Political Fall Out from the Iraq War

Bush's mistakes have seriously damaged the supply chain. The worst mistakes in our view have been made in the war in Iraq. The Iraqi oil supply structure has been damaged by sabotage, and because of the insecure conditions created by failure to control the insurgency, its aging equipment has not been updated, nor has any new exploration been carried out.

A second set of mistakes concern relations with Iran. The large and generally prosperous (and well-educated) Iranian middle class has long tended to have a largely favourable view of the US and the West. Many are thoroughly fed up with the clerics. There is a strong pro-democracy movement – pro-democracy, but also nationalistic. This movement would favour good relations with the West, but would also insist on controlling its national resources. Yet the Bush administration does not seem to have been interested in cultivating Iranian

¹⁷ The Bush administration had some very specific hands in mind – the leading American and UK majors and the US oil services firms, like Halliburton. In practice they seem to have paid considerable attention to ensuring that these select firms would be well rewarded. But it has proved very difficult to get the Iraqis to agree to the Administration's proposed legal framework for the oil sector.

democrats. Indeed, its policies have alienated Iranians, and strengthened the position of the clerics, while weakening the reformers, and have generally driven the country into a stance of resistance against American bullying.

The discussion of 'Democracy in Iraq' has often seemed detached from reality; voting and elections are surely important, but if they proceed on tribal lines they are not that much of an advance. Democracy means accepting the legitimacy of your opponents and their agenda. Elections may be less important than, for example, horse-trading and compromise, neither much in evidence in Iraqi politics. Moreover, democracy does not spring full-blown into being; serious pre-conditions have to be in place –most of which are missing in Iraq.

But even if democracy began to work well, there would be a serious problem. An Iraqi government that reflects wishes of the majority, however imperfectly, almost certainly means Shiite rule. A Shiite government will want good relations, perhaps an alliance, with Iran, their neighbour to the East. And they will not want a long-term American presence. They will also want to help the oppressed Shiites in Saudi Arabia, on their Western border. Such 'help' would most likely be strongly destabilizing. (Fantasies about 'redrawing borders' lead to wars.)

A third set of terrible mistakes is related to the War on Terror. Instead of catching Bin Laden and removing the Taliban from power the US reduced its troop commitment and outsourced its security concerns to the warlords, who are also drug lords. Instead of investing in the rebuilding of Afghanistan the US pulled back. It could have and should have prepared a 'Marshall Plan' for the region, developing effective education for universal literacy, establishing serious public health programs, and building an extensive system of roads, sewers, public lighting, water supplies, and so on. But the US simply let the

opportunity slip away, cut back its commitments and never even established effective security.

In Abu Ghraib and at Guantanamo, and in the 'rendition' policy, the US actively supported a policy of torture, which when challenged, it then defended, undermining the image of the US across the world. It made this worse by advancing and defending measures bordering on police state policies in the US. The result was a world-wide loss of prestige and goodwill.

A fourth set of mistakes concerns the excessive and uncritical support for Israel. In particular, it should be a US priority to establish peace and prosperity, which requires settling the Palestine dispute. From the start the conflict has been a running sore, frequently undermining US interests. Of course, Israel is a strong and loyal ally of the US, a working democracy, a powerhouse economy and the toughest military in the region. It is also the largest recipient of US aid. But the Bush administration seems to have accepted the Israeli interpretation of events and priorities in the region and there is no excuse for that. For here the interests of Israel and the US arguably diverge. A settlement, on virtually any terms that will provide lasting peace, would seem to be the correct US priority. The details don't matter for the US. But for Israel they do; the terms of the settlement are crucial. The US should not be taking Israel's side on the details.

Finally there has been uncritical support for pro-Western regimes in oil-producing countries, even when these regimes are authoritarian, and often dysfunctional. The leading pro-Western (or supposedly pro-Western) oil-based regime in the Middle East, Saudi Arabia, has not displayed much ability to develop a growing and dynamic economy, such as could be expected to improve the quality of life for their people. To different degrees the same can be said for many other pro-Western oil countries. To compound the problem, opening itself

to the charge of hypocrisy, the administration has made efforts to unseat anti-Western regimes in oil countries like Venezuela and Iran, even though those governments were popularly elected.

Saudi Arabia has been both antagonized and made fearful. Arguably it no longer trusts the US. UPI reported in 2004 that it had discussed acquiring nuclear technology with Pakistan, though both countries denied it.

Machiavelli's famous dictum – “never wound a Prince” – may be the most relevant comment: the regime in Saudi Arabia is still intact and still controls the oil, but appears to be trying to lessen its dependence on, and its subservience to, the US.¹⁸

The impact of these mistakes can easily be seen to be far-reaching, and will very likely last for a long time. For example, as we have already seen, the war and the related policy mistakes have driven up oil prices, creating uncertainty throughout the world economy and seriously damaging many weak economies that cannot afford an increase in their imports. As we argue below, there is a worldwide threat of macroeconomic instability that has been kept under control to date; but the agreements and patterns of cooperation that contain it have been weakened by the widespread anger and revulsion against the US. All these problems have been exacerbated by the high price of oil.

Winners and Losers When Oil Prices Increase

Above all, driving up the price of oil provides huge windfall funds to a number of anti-western governments, and dictators, providing funds for example to fundamentalist movements. The rise so far has already given us clear winners

¹⁸ The NY Times reported on March 28 that King Abdullah had described the US invasion and occupation of Iraq as ‘illegal’ – which would justify attacks on US soldiers. This amounts to an open challenge to US policy. Judging from its surprised reaction, the State Department evidently had no advance notice of his remarks.

and losers. Owners of oil wells and holders of oil company stocks have been lucky. The income and wealth of the big oil companies and Middle East countries have been increasing on a scale not seen before. Oil wells are the new gold mines. The Financial Times has recently reported that in Saudi Arabia the stock market went up by 220% since 2002, the stock market in Egypt went up by 200 %, the stock market in other small oil producing countries went up by a factor of 7 or 10. Real estate prices in the Middle East rose dramatically, and other asset prices went up as well. Due to their oil exports, the Arab countries also now have a very high trade surplus¹⁹. Russia too has tremendously participated in the increase of the price of gas and oil. The Russian stock market increased by 80 % last year and Russian “Nouveau Riches” have increased their wealth and the Russian central bank has hugely increased their currency reserves.

These dramatic increases in the value of assets have not, however, improved the standards of living of ordinary people in many oil producing countries. Some, of course, have fared pretty well; the standard of living is high among the Gulf countries: Kuwait’s per capita income is \$19,000 – 20,000 with UAE, Bahrain, Qatar, at similar levels; but Iraq is about \$3500, Algeria about the same, Iran a little higher, and Nigeria, much lower. Nor have these countries generally carried out public investments that would improve the health, education, or social infrastructure for their populations. Far from being a boon, oil –like diamonds – seems to be a curse.

¹⁹ Some months ago the US discovered that the investment of excess oil profits can turn into a security problem. Dubai Ports attempted, through a British Firm, to takeover the management of six US ports. Dubai Ports is a state owned *oil company that had come into a huge amount of cash through the higher oil price. Typically the flood of oil money will be channelled back to advanced countries, looking for safe and profitable investments. What was new in this case was that that the Company was owned by a foreign Government, in particular by one from the Middle East. The US has actively, even stridently, advocated free trade and capital flows across the globe since the Reagan Government, but this time they had to say: that is not what we meant. Indeed, much of Congress, in both parties, resisted this deal and the deal was finally given up. Dubai Port found other lucrative investment in the service sector, in particular in New York real estate.

The Journal “Forbes” reported recently that the numbers of billionaires on the globe has increased from 476 to 691 just in the last 2 years. The source of this new wealth is coming from stocks on scarce resources, in particular from gas and oil wells, steel production, pipelines and refineries. There was only one productive enterprise among those 215 billionaires --- this was Google. The richest among the “Nouveau Riches” was – according to Forbes—the American pipeline tycoon Dan Duncan.

Among the most important effects of the oil shocks of the 1970s were the huge inflation rates (US inflation rates went up to 15%) with a subsequent strong reaction of the Fed to increase the nominal interest rate to 15 % and more. The engineered recession 1980/81 was very costly in terms of unemployment and loss of income. It spilled over to a world wide recession and long stagnation period for many countries. On the other hand, the low income countries with little natural resources or oil were driven into a debt trap. They could not pay the huge oil import cost from regular income but had to borrow instead. The run up of public debt and foreign debt, the high inflation rates (in some countries hyper inflation rates) as well as the huge debt overhang was disastrous for many countries and they ended up suffering in stagflation in the 1980s.

This situation could be repeated again. There is still growth in the world economy -- next year predicted to be roughly 3.5 % for the world economy by the IMF ---but high oil prices (and sometimes, rising oil prices) can therefore seriously damage the world economy. But prices that are too low can be damaging, also. If the price of oil is too low, there will be no incentive to conserve. Too much fuel will be used, contributing to global warming. When the price is too low, oil will undercut alternative fuels, and the development of renewable energy will be hindered. So it is important that the price of oil should not be too high, but it also should not be too low. Needless to say, ‘high’ and ‘low’ are judgments on which there can be, and usually is, disagreement.

The oil producing countries now appear to enjoy a roughly \$530 billion trade surplus. The American trade deficit in the year 2005 was roughly \$800 billion. This raises a question: why should the oil producing countries invest their trade surplus in American treasury bonds, with relatively low returns, and not in American equity and real estate?

The oil producing countries now have huge financial reserves that not only support the real estate market bubble, but also look for other profitable investments.

The effects of this new creation of wealth can be seen not only in the distortion of asset and real estate markets, but also in the direct impact on American - and other advanced country - consumers, as they face drastically higher prices for heating oil and car gas. The new wealth generated from this is naturally concentrated in oil producing countries, and there are many poor low income countries, that face high energy bills and cannot pay the energy bills without borrowing. We may be about to see a repeat of scenes from the late 1970s and 80s.

There is, however, as mentioned, a silver lining; a high and volatile price of oil, threatening economic disruption, also has the important side effect of stimulating conservation movements. The high prices make conservation worthwhile, and call attention to the likelihood of eventual oil shortages. The discussion of the oil dependency of the advanced economies has just begun in the US; it should have started much earlier, as in Europe.

The Effect of High Oil Revenues: Fundamentalism or 'Resource Socialism'?

Oil country revenues are typically used unproductively by pro-Western regimes – Saudi Arabia, Kuwait, Egypt, Nigeria, United Arab Emirates, among others all

have huge oil revenues, with which they underwrite the government budget. But none have developed successfully, in the sense that they could maintain anything like their present standard of living if the oil ran out. On the other hand, oil regimes opposed to the West often do no better, e.g. Algeria, Libya, Iran. Corruption is part of the story, but only part.

The definition of ‘an unproductive use of revenue’ is important. This is often considered ‘unscientific’ because it involves value judgments; but the judgements involved are very simple, with a strong, even dominant, factual component. The statement, for example, regarding a certain country, that a large part of the population is undersupplied with necessities, while a small minority wallows in luxuries, will be largely a *matter of fact*. It is either true or false (or somewhere in between) on the basis of statistics – even though it sounds very judgmental. Such claims have a strong purely factual aspect, and should be a part of every serious discussion, especially about the use of oil revenues. Another important claim may be that the government supplies most of the population with necessities, but not with adequate education or with jobs, while reserving the ruling jobs and luxuries to a small minority. The population is therefore unable to develop the skills needed for modern life; the labor force is neither motivated nor able to work effectively and migrant workers have to be imported – as in Saudi Arabia and the Gulf States.

This unproductive use of revenue is closely related to ‘Dutch Disease’, and to the widespread increase of inequality. Dutch disease means roughly that large exports of oil, especially when oil prices are high, will drive up the exporting country’s exchange rate²⁰. A high exchange rate means the country’s non-oil exports will be expensive, and so its exporters will tend to lose their markets.

²⁰ So-called because the syndrome first appeared when Holland discovered gas in the North Sea in the 1970s. As earnings flowed in the guilder rose, and Dutch exports collapsed. With a high guilder German goods were now cheap and German manufacturing took over Dutch markets, leading to business failures and a rise in unemployment.

On the other hand imports from the advanced world will now be cheap, so they will flood in, and undermine the markets of domestic producers. The combined effects on non-oil exports and on imports will generally weaken the country's manufacturing – and many of its service industries, too. There may be a widespread loss of jobs, leading to many households becoming dependent on one form or another of welfare. Skills will be lost; children will grow up without any sense of what kind of career they will have – many may never have any.

With oil revenues, the government can reduce or eliminate taxes – it therefore asks nothing of the populace – and generally offers them little or nothing in return. There is no bond between people and government. Such governments may be predatory and violent, with active military repression, or like Venezuela for many years, rather moderate. But either way, the state is separate; it is not closely or productively linked either to the economy or to the people, and it does not promote development.

Oil economies have provided fertile ground for the rise of fundamentalism. Indeed, it first flourished in Saudi Arabia with the encouragement of the regime, then as Al Quaeda developed, in opposition to it. In Algeria, Egypt, and Nigeria, all oil-based economies, it has grown until it poses a threat to stability, and in Iran, it helped to overthrow the government and then out-manuevered the secular radicals and established itself in control. Fundamentalism is powerful in the Sudan, in Somalia, in Yemen and signs are beginning to appear in other oil countries, too, e.g. in some of the 'stans'. It has not made much headway in Azerbaijan or in the Gulf States, however.

Religion provides answers that cannot be challenged by argument or evidence; moreover, to those who have been uprooted and now feel threatened by an

uncertain world, they are familiar answers, grounded in tradition. Moreover, religious movements bring believers together, they comfort one another and reinforce one another's beliefs. For people who are uncomfortable with uncertainty, this may prove very consoling. It provides an anchor in a sea of change. Of course, fundamentalism is a simplification, usually distorting, of religion, but for many a simple answer is easier to understand and to accept. Fundamentalism, of course, does not imply terrorism and many fundamentalist movements do not lend any support at all to terrorist movements; but the case is not simple. Today most fundamentalist movements are anti-Western and anti-modernist, and resolutely oppose liberal tolerance and scientific thinking. Fundamentalist beliefs, because absolute, can easily be adapted to – and are widely used to – justify extreme positions. Fundamentalism does not imply, and may not encourage, terrorism or even militant rejection of modernity, but under some circumstances it could well provide a sympathetic background and an appropriate frame of reference for such activities.

An 'Oil economy' might provide favorable breeding grounds for fundamentalism. Either from Dutch Disease, or as a result of corruption and predatory governments, there is likely to be widespread unemployment, deficient schools, a sense of uselessness among young people, a sense even that existence is purposeless, all of these leading to poor skills and weak self-respect among the labor force. In addition, as the price of oil fluctuates the resulting unexpected swings of the economy will create a sense of uncertainty, while the top-down development uproots local communities, and creates a sense of anomie. No one knows what to expect. For many, there are no jobs, no industries, no trades, there is nothing to do. (In Algiers, young men stand around 'holding up walls'.)

Retreating to fundamentalism is a destructive response; it is looking to the past – a largely mythical past – for guidance, rather than facing up to the new order of things and challenging the future. A much better and more positive response can be seen emerging in some parts of the world, where popular movements are beginning to take control of oil revenues and redirect them for development. The beginnings of such a movement can be seen in the rise of ‘Resource Socialism’ for example, in Venezuela and Bolivia, with stirrings visible in some other countries. In Venezuela President Chavez has dramatically changed the fiscal priorities, greatly increasing the level of government spending on social measures, especially health and education, and on infrastructure. Whatever one may think of his behaviour on the international stage, these new government programs, together with shrewd political moves, have earned him huge popularity.²¹ His government is now actively involved both with the people and the economy - though many will argue that his programs could be better designed, (and the traditional elites will oppose his politics).

‘Resource socialism’ is a movement that takes an opposite position to fundamentalism, being equally opposed to unregulated capitalism and free markets, but strongly in favor of populist reform and redistribution, opposed to authoritarian religion, and committed to working through democracy. These movements generally resent the power of the West, and it will not be easy to work with them. But they are socialist or populist and modern; they do not look to religion or to mythical pasts. They aim at a fairer and more egalitarian society, at providing greater opportunities for education and better healthcare. They offer an alternative to Western-style ‘globalization through free markets’, and they may come to provide a blueprint for a new route to development, which might help to overcome the tendencies to inequality and injustice that seem so strong in the mainstream approach.

²¹ The programs seem to be reflected in improved social statistics. But so far there has been almost no impact on unemployment, or on the “informal sector”, which absorbs about half (!) of the Venezuelan labor force.

Conclusions and Outlook: A Middle Eastern Union

Understanding both the invasion of Iraq and its consequences will be helped by setting the issue in the context of the changing character of the global oil market. Many commentators fear that world oil production is near to peaking; in particular, it has been argued that Saudi Arabia can no longer be relied on to play its accustomed role of regulator of the price. Iraq, however, is widely believed to have huge unexplored potential reserves; if these were managed properly, under Western guidance, Iraq could work jointly with Saudi Arabia, or even replace it, if it breaks up, as the regulator. In this way it might be possible for the world to continue to rely on oil for the foreseeable future, allowing a more gradual and less disruptive transition to other energy sources.

‘Securing the Middle East’, broadly speaking, must be seen as a sensible policy objective, but, as we explain below, we mean it in a different sense than usually perceived; the advanced world needs friends there, and not only currently depends on oil from that region, but will do so even more in the future.

Invading Iraq was a terrible way to go about achieving this. The pretexts offered by the Bush Administration were absurd, and the whole operation certainly violated the precepts of good diplomacy, if not, as many have charged, international law. Certainly the Iraq adventure has seriously damaged the oil supply chain. No doubt the worst mistake was invading in the first place, but the conduct of the war since has added immeasurable further damage, not only to the Iraqi people, and to the oil supply chain, but also to America’s image in the world.

The emergence of the violent resistance against the American Invasion has led to spill-overs to other Middle Eastern countries – think of the war in Lebanon,

conflicts with Syria, the growing problems with Iran, and the intensification of the Palestine problem, ... not to mention unrest and political instability in many other countries. All these difficulties have further destabilized the region. This in turn has led to geopolitical uncertainty that has not only created an overall upward trend in oil prices but has generated an excessive volatility in those prices.

Resource Socialism provides an alternative vision for the use and management of oil and other resources; they are exploited for the benefit of the people, and the revenues are plowed back into social investments, improving the life of the people. But this approach still does not address the question of how the world can manage its growing energy problems. As we have seen, 'Leaving it to the market' is no solution, while the fiasco in Iraq shows that the military option leads to disaster – but the discussion so far has not even addressed what seems to have been the underlying problem: if oil is either running out, or in danger of becoming much more expensive, while the present system of managing prices and supplies, dependent on Saudi Arabia, may break down, how can the energy needs of the advanced world be guaranteed, consistently with supplying the growing needs of the developing world? If Iraq indeed has huge, unexplored and undeveloped reserves of high quality cheap oil, it will have to be part of the answer - while the world searches for alternative energy sources.

But if answers are to be found they will have to take new forms. The state of governance in the Middle East does not bode well for development. The region is sinking every day into deeper chaos – even though it is situated in the midst of great wealth. Deadly fights have arisen over religious themes, drawing energy from historical conflicts deep in the past, as well as from current borders that cut across ethnic lines. The situation recalls the religious wars of the 17th century in Europe, especially the 30 year conflict that was finally put to rest by the Peace Treaty of Westphalia in 1648.

Europe, too, fought wars across centuries, wars over borders, clashing historical claims to land and cities, fuelled by deadly ethnic and national rivalries. But with the Second World War the region declared 'enough'. Academics and farsighted politicians, indeed, the whole population proclaimed: "Never again war in Europe" ("Nie wieder Krieg"). The founding fathers of what is the European Union today envisioned a united Europe, first starting with France and Germany in 1953 and developing an industrial policy for heavy industry, then creating a Pan-European free trade zone through the treaties of Rome in 1957, then moving to free mobility of goods, capital and labor in the 1970 and 1980s, pegging the exchange rates through a European snake and, finally, introducing a single currency in 1999 and 2001. From early on critics of this project thought, how utopian, this will never succeed. Yet today it is reality; conflicts over borders have disappeared, and national dominance over regions has dissipated. It does not matter any longer if it is called Elsaß-Lothringen or Alsace-Lorraine, or if it belongs to France or Germany.

Can a similar development be envisioned for the Middle East; could we imagine a Middle Eastern Union? Given the deadly conflicts in the Middle East a bold vision will be needed. The Middle East has huge wealth in its oil; indeed, it has far more wealth and income than devastated Europe had after the Second World War.

A kind of Marshall Plan could be envisioned – jointly provided by the EU and US/UK, together perhaps with participation by Russia and China –even India? The developed world, and some of the developing, could be pulled together into a kind of Consumer's Union which would provide investment funds to develop the oil, loaning the funds on generous terms, together with technological assistance, in return for long-term guaranteed stable supply at a negotiated price.

Such kind of “Marshall Fund”, first, set up from abroad, could help to develop the region. The Western oil companies could and should take part, having the best technological skills and expertise available. The proceeds from the sale of oil would then be partially used for repaying loans to that “Marshall Fund” and partially go into a Development Fund – modelled on those of Norway and Alaska. (Preliminary ideas of this kind have been expressed by Askari et al., 2006²²). The Development Fund would be devoted exclusively to social infrastructure, public utilities, education and health, including universal Internet access, and public works job programs. The commitment would be to develop growth and employment. The participating countries would draw on the development fund for approved projects in proportion to their participation. For Middle Easter countries without great resources like Yemen, or whose resources are almost entirely undeveloped, like the ‘stans’, grants-in-aid could be arranged, perhaps along with very long term loans, to be repaid only after resource development.

A common industry and development policy could be pursued, using the oil revenues as the basis to fund investment in infrastructure, education and health. Freer trade could develop across borders. Currencies could be pegged, as in Europe, with fiscal and monetary policies coordinated. It would even be possible to consider the establishment of a currency zone. (Indeed, there are proposals to establish a Gulf Currency, and also a currency for the Maghreb.) Some countries already have a highly educated labor force, others are developing their labor resources. Egypt is currently setting about to revamp its educational system. Besides oil, many countries have huge revenues from tourism. Development policies, fiscal and monetary policies and regulation

²² Franz Josef Radermacher and others have proposed a ‘Global Marshall Plan, 2003. UK Chancellor of the Exchequer Gordon Brown has strongly supported the UN Millenium Goals, and proposed in 2003 an International Financing Facility, that would provide new funds for human and social development. These and related proposals are directed against world poverty, but of course also include the Middle East. Our proposal focuses on the Middle East, which already has the wealth required, but needs an appropriate political framework in order to mobilize and put it to use. Our proposal fits easily into the larger context.

could be more effectively coordinated, and foreign direct investment attracted. Industries to replace oil when it eventually runs out should be developed and modernized with Western help. If it is true that the Middle East will be the most important region supplying oil for the next 50 years, thereby underwriting the transition to a new age of renewable energy, it would be foolish not to have such a bold vision.

To put it mildly the present governments in the Middle East would be unlikely even to consider such a plan. Almost certainly nothing can be done without some resolution of the Israeli-Palestine conflict. Yet the outlines of a solution to that conflict were developed during the Clinton Administration and have been recognized for some time. And the present pattern of governance is not likely to endure, nor should it. There will be upheaval and change; it is important to be ready with a plan to take advantage of the fact that *there is no shortage of resources to build a prosperous new order in the Middle East*. In Africa there is poverty because resources are lacking; in the Middle East poverty and chaos have taken over amidst great wealth. This is the key to unlock the door to the way forward.

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