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FACTORS AFFECTING WORLD OIL PRICES IN THE 1980's

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To get a measure of the hazardousness of long term oil price forecasts one only needs to look at the 10-year predictions made in 1970. None of the experts came even remotely close to the actual world price of last year. Nor did they do much better on supply and demand projections. By 1972 at least the direction of some of the structural changes in the market which underlay the subsequent price revolutions began to emerge.

Perhaps, as we approach 1982, we are in a similar situation regarding the remainder of the 1980's. We can see some structural changes in the market place which should make the 1980's very different from the 1970's. But to guess at the specific price in 1990 is still quite hazardous. Let us therefore confine our analysis of the world oil price in the 1980's to the principal trends which will influence it.

The 750% increase in the real world oil price between 1972 and 1981 was made possible by the interaction of three principal factors: market trends, extraneous political events and cartel policies. Let us look at how each of these factors operated in the 1970's and then speculate on their likely roles in the current decade.

Market trends in the 1960's and early 1970's were such that a substantial increase in the real price of oil would have been inevitable even without OPEC from the mid-1970's on. The sustained growth rate in world oil demand at the pre-1973 price level was simply too fast relative to physically available supply and thus had to be substantially curtailed by means of higher prices to restore a market equilibrium. By 1978, after the price increases

of 1973/74 had eroded somewhat in real terms, oil demand began to rise again at a rate which, if continued, would have led to supply tightness within 5-6 years. Thus, by the early 1980's a further real price increase to balance supply and demand would have been required even in the absence of the Iranian revolution. The revolution advanced the need for the increase because it caused a long-term, perhaps permanent, reduction in OPEC's producing capacity on the order of about 10%. Hence, directionally in both 1973/74 and 1979/80 the underlying market price trend was clearly upward.

Currently, the market trend is of course just in the opposite direction. Last year's 5% decline and this year's likely similar decline in world oil demand (outside the Communist Bloc and China) are the biggest annual drops, by far, in the entire post-war period. There is a debate over what part of the decline is cyclical and what part is structural. The cyclical part is ephemeral and will be reversed once the industrial economies of the world recover from their present slump which is now expected in the second half of 1982. This is just what happened after the 1974/75 oil demand drop which followed the first world oil price shock. The structural changes underlying the demand reduction are of course more enduring since they reflect economically motivated trends to conserve oil, use it more efficiently and substitute other fuels for it. In the short run these trends are not readily reversible nor even arrestable.

Clearly, both cyclical and structural factors have been at work in reducing world oil demand by almost 5 million B/D between 1979 and 1981. OPEC oil exports have been under additional downward pressure from the current large scale extraordinary world inventory reduction which is by definition self limited. Thus, the demand drop of the 1980/81 period will be reversed when the inventory reduction is completed and economic recovery is underway. But the increase will be strongly tempered by a continuation of the structural downward trend in oil consumption. Automobile fuel efficiency in the U.S. will keep rising throughout the 1980's because of existing legislation, atomic power plants currently under construction throughout the world will progressively reduce fuel oil requirements for power generation, most new commercial airplanes are more fuel efficient than those they are replacing, most new homes and buildings are designed with much more attention to fuel conservation than those built before 1975, and coal will maintain a substantial price advantage over fuel oil under any realistic price scenario and, hence, will continue to displace oil in certain markets. One could easily find other examples of structural reductions in oil demand which will be carried forward for a number of years by their historic momentum even if there should be some decline in the real price of oil.

Taking account of both the cyclical and the structural factors and assuming for the moment that real world oil prices will remain approximately unchanged, world oil demand will start recovering

next year but will climb at a very slow rate and is unlikely to exceed the 1979 level of about 52 million B/D in this decade. Meanwhile the existing production constraints resulting from the Iranian-Iraqi war can be expected to end, freeing substantial additional OPEC supplies for export. Also, non-OPEC supplies will continue to increase, perhaps at an annual growth rate of about 500,000 B/D to 1985 and somewhat less thereafter.

All this means that in the absence of major extraneous supply interruptions (about which more later) readily available world oil supplies will generally be comfortably in excess of demand until at least the late 1980's at unchanged real prices. Regarding OPEC supplies, foreign and domestic requirements for its crude oil should remain below the organization's current collective allowable crude oil producing capacity of about 28 million B/D until at least the late 1980's and will not come near its current maximum sustainable crude producing capacity of around 33 million B/D (absent the existing military restrictions on production in Iran and Iraq) even by 1990.

Thus, market conditions do not require an increase in the real price of crude oil for the next 7-8 years to balance supply and demand, since throughout this period there will be excess producing capacity. In fact, for the next 4 years the magnitude of the excess will be such that on the basis of market conditions the real world oil price should decline from its present level. This is in sharp contrast to the 1970's when market conditions, as we have seen, put upward pressure on prices.

Our next question is the likelihood of major oil supply disruptions in the 1980's and their impact on prices, since the principal reason for the price explosions in the 1970's was of course the physical disruptions which created actual or perceived temporary oil shortages.

Since supply disruptions are by their very nature unpredictable, speculations about their probability are not particularly useful. Neither are projections based on historic occurrences. There is now a tendency to downgrade the likely impact of future supply disruptions because of the most recent one, the Iranian-Iraqi war, has had only a minimal effect on prices even though the volume of oil affected was quite substantial. It is certainly true that the Iranian-Iraqi disruption has laid bare the previous axiomatic assumption that any major oil supply disruption would inevitably cause a price explosion. But this revisionist view must not be carried too far. The latest disruption occurred when world oil stocks were exceptionally high and world oil demand was rapidly falling. Had it occurred at a different phase of the inventory or business cycle it might have had a very different impact on prices.

Still, some improvements from the 1970's can be expected in this area in the 1980's. The principal ones are higher OPEC excess producing capacity and higher levels of government oil inventories for security purposes. As to the first, OPEC's effective sustainable excess producing capacity during the 1973-79 period was 10% or less of total producing capacity (except in 1975

when it was much larger). Currently it is around 30% and if the military restrictions on Iranian and Iraqi production end, it may range between 15% and 20% throughout the 1980's.

Regarding government oil inventories, there were none in the U.S. at the time of the Arab oil embargo and virtually none when the Iranian revolution broke out. Currently the U.S. Strategic Petroleum Reserve is slightly above 200 million bbls. By the beginning of 1984 it could be as high as 400 million bbls, enough to offset a 2-million B/D shortfall in U.S. imports for nearly 7 months. Japan, too, had no strategic government reserve in the two previous oil disruptions but now has over 50 million barrels which is separate from the industry's inventory.

It appears therefore that if any oil exporting country, other than Saudi Arabia, were to cease all of its exports for the better part of a year, this would not have a major effect on world oil supplies since the production loss could be offset by increased output from other OPEC countries, particularly Saudi Arabia. This was clearly not the case in the 1970's.

The situation is of course very different for Saudi Arabia. A Saudi output reduction of, say, 50% caused by non-market factors, would bring about a world oil shortage with major price implications, if maintained for several months. Whether and under what conditions such a reduction might occur is beyond the scope of this article. It would present a global strategic problem and would have to be dealt with on that basis.

Now we come to OPEC's ability and willingness to influence prices in the 1980's. It has been suggested that OPEC has already lost this ability. However, this is not so. With a disproportionately large contribution from Saudi Arabia the organization has been able to maintain a floor price for its oil at \$32/bbl for Saudi Light quality crude. This is substantially higher than what the current price would be under free market conditions. Since no OPEC member is attempting to sell below the floor price, the organization remains effective, although its upward price mobility is severely curtailed by market forces.

OPEC's future as an effective price setting organization depends on its ability to maintain enough cohesiveness among its members to continue to set and enforce a floor price which is a multiple of production cost. This, in turn, depends on its members' excess producing capacity. As we have seen, under conditions of approximately unchanged real prices OPEC's excess producing capacity may amount to 15-20% throughout most of the 1980's.

If the real price should rise by an annual average of, say, 3.5% over the next 10 years, which would be about in line with OPEC's long term pricing strategy announced in early 1980, export demand for OPEC oil could well drop by some 3.5-4.0 million B/D, given the fact that the worldwide reduction in oil demand resulting from the price increase would be concentrated on imported oil and within the import sector on OPEC oil. This means that total OPEC oil demand could fall towards 20 million B/D. OPEC would then

operate at about 60% of its technical capacity. This would make it very difficult for the organization to continue to maintain its price cohesiveness. With 13 million B/D of readily producible OPEC oil overhanging the market, some members may succumb to the temptation to sell more oil by offering hidden or open discounts to their customers. Once this process spreads it would rapidly undermine OPEC's floor price defense and cause prices to tumble.

Probably OPEC's long term survival will depend on its ability to maintain its crude output between 22 million and 28 million B/D. If production drops below the lower level of this band for more than a year, the organization's price cohesion, which is its raison d' etre, would come under extraordinary pressure. This would be particularly true after the cessation of Iranian-Iraqi hostilities and the consequent significant increase in OPEC's exportable supply. At the upper end of the range--28 million B/D of crude--OPEC's remaining effective spare capacity would be quite small. Hence, if production exceeds this level market forces would enable OPEC to raise its real prices once again at a rapid rate, possible even in the face of Saudi opposition. Initially, this would benefit OPEC but over time it would accelerate existing measures to conserve and replace imported oil.

As of now, it seems that an OPEC production level within this band is more likely during the 1980's than one below or above it. If this is so and if Saudi Arabia maintains its current oil policy, which is by no means certain, real world oil prices should neither rise nor fall substantially in the 1980's, though they may fall somewhat between now and 1985 and rise somewhat thereafter. Compared to the 1970's this would be a very tolerable development.