



Perspectives by Ruth Lea

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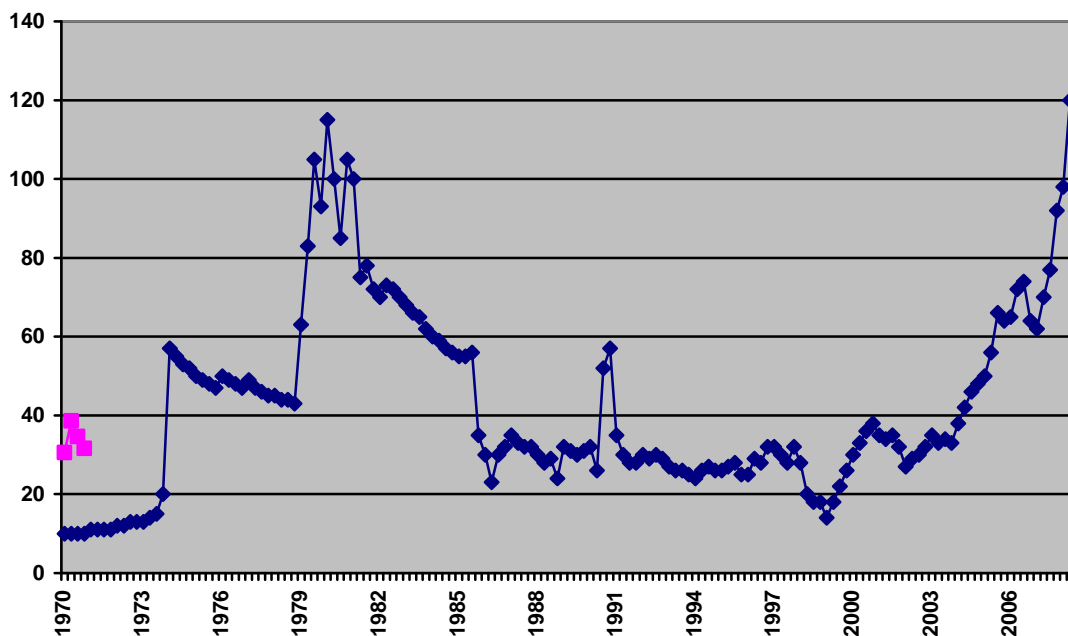


The days of cheap oil have gone, but the “peak oil” theory is far too bleak

The recent increase in crude oil prices has been extraordinary. Between 1999 and 2006 oil prices, in nominal terms, rose from an unsustainable “low” of \$10pb to \$60pb. Since then they have more than doubled again and recently touched \$135pb.

As the chart below shows, even if allowance is made for inflation, current prices are around the levels recorded in the late 1970s and the early 1980s, when supply was disrupted by the Iran/Iraq war. The current developments in the oil market can indeed be designated an “oil shock” – the “2008 oil shock”.

Crude oil prices, \$ per barrel, 2008 prices (deflated by the US CPI), quarterly data 1970Q1 to 2008Q2+



Source: chart reconstructed and adapted from Chris Giles and John Willman, “Over a barrel”, FT, 24 May 2008. The original data source is the IMF’s Average Petroleum Spot Price (APSP) – the average of UK Brent, Dubai and West Texas Intermediate (WTI).
+ 2008Q2 is calculated for April and May data only.

One factor behind the high dollar prices is the weakness of the dollar itself. World prices denominated in dollars are inevitably higher than otherwise would be the case when the dollar is weak, as they would be lower than otherwise would be the case if the dollar is strong. Two other possible factors are, firstly, the presence of “speculators” and, secondly, the “peak oil” notion that oil is “running out”. We have reached a point of maximum production and the only way forward is inexorably declining output.

The Bank of England has already dismissed the notion that speculators are a major factor in driving prices higher.¹ Investment in the oil market can increase rapidly without driving up oil prices. This is because speculators are not buying any actual crude oil. Instead, they buy contracts for future delivery. When those contracts mature, they either sell them with a cash payment or sell them on to genuine purchasers of crude oil. Either way, no oil is hoarded or somehow kept off the market. The contracts are really a bet about which way the market (prices) is going.²

Rather the oil market has been caught between the rapidly rising demand for the product, mainly from China and other emerging economies, coupled with sluggish output. And given the tight spare capacity, the market has been especially vulnerable to disruptions and other special factors, which have arguably been behind the rapid rise in prices over the last 12 months, as shown in the chart below.

Brent Crude Oil price, \$/barrel: 12 months to end May 2008



Source: BBC Website (1 June 2008).

The “Peak oil” theory

The “peak oil” theory states that the peak of oil production for a region, country or even the globe will be reached at some specified point time. A relatively rapid period of terminal decline will then follow. The theory was originally associated with US geologist M. King Hubbert, who predicted in the mid 1950s that US oil production would peak between 1965 and 1970.³

The “peak oil” theory also implies that, if global consumption is not mitigated before the peak, an energy crisis is likely to develop. Falling supply coupled with unmitigated demand will lead to dramatically rising prices which will lead to a devastating energy crisis. Imminent, apocalyptic scenarios tend to feature strongly in “peakist” literature.^{4, 5}

No analyst, to my knowledge, would disagree with the “peakists” that, at some point, easily accessible, naturally occurring oil reserves will decline substantially. Such oil reserves are a finite resource. Indeed much of the relatively cheap and easy to extract oil has already been extracted. But there are good reasons for challenging “peak oil’s” devastating energy crisis scenario.

The first is that oil is but one source of energy – albeit an extremely important one. There are obvious alternatives, substitutes, for electricity generation and heating in particular. Nuclear power, which is undergoing something of a renaissance, natural gas (itself a finite resource), coal (of which there are abundant reserves) and renewables are all viable alternatives. Transportation is the one area where substitution is much more of a technological challenge, and is therefore understandably of particular concern to “peakists”. But even here there are signs that developments are under way. It is surely no coincidence that car companies are accelerating their plans to sell electric hybrids. As the two 1970s oil shocks effectively put an end to the use of oil for power generation, the latest oil shock may well begin to free transport from oil’s grip.

The second is that markets, not least of all the oil market, are remarkably flexible in responding to changes in supply and demand. As already observed, buoyant demand, especially from China, has driven oil prices sharply higher in recent years, whilst output has been relatively flat. And, of course, these price changes then act as signals for both consumers and producers of oil to change their behaviour. Whilst it is the case demand and supply can be fairly inelastic in the short-run, there is no doubt that both demand and supply will eventually respond.

Consumption of oil and oil-derived products, whether by households or businesses, will fall, other things being equal. Consumers will buy smaller, more efficient cars (the market for “gas guzzlers” is already shrinking) and take fewer plane trips. Businesses will become more energy conscious – and more increased energy saving technologies will become economically viable. The “peakist” view that consumption may not be mitigated before the post-peak terminal fall in oil production, simply fails to accommodate a very fundamental truth about consumers in market economies. Providing there is not a cataclysmic collapse in oil production leading to sudden stratospheric prices, consumers will have every opportunity to adapt to a world of more expensive oil.

Higher prices will also stimulate production, whether short-term by exploiting spare capacity or long-term by expanding capacity, possibly employing new technologies. Oil that was considered too expensive to extract at, say, \$20 per barrel could become extremely attractive commercially to extract at \$120 per barrel.

Concerning “conventional” crude oil reserves, where oil is extracted from a traditional [well](#), higher prices would mean that it becomes commercially attractive to extract oil from more costly and generally less attractive sources – whether politically, geographically or geologically. It is no coincidence that interest in exploiting the Arctic’s geological riches is a now such a hot topic. Similarly, “unconventional” crude oil sources, where the liquid oil is extracted from tar sands (oil sands) or oil shales, or extracted through gas-to-liquid processes or coal-to-liquid processes, become more economically viable even though these sources are costly and energy-intensive.

As the peakists fail to accommodate consumers' behaviour in market economies, they also fail to accommodate producers' behaviour. Producers would eventually adapt to changing commercial circumstances in order to supply the demand for oil – albeit at a higher price. Oil will not just “run out” and, of equal significance, other forms of energy will be developed as substitutes. Under these circumstances, markets will adapt and energy crises should be averted.

But oil will remain expensive

But the “peak oil” theory's warnings can act as a useful wake up call about the likely future of oil prices. There are two reasons for saying this.

The first is that accessible, cheap to exploit, oil reserves are a finite resource, as already stated. Cambridge Energy Research Associates (CERA), a sharp critic of “peakist” theories, openly acknowledges this to be true, for example. However, CERA does not envisage an imminent peak and subsequent, apocalyptic collapse in oil production. Instead they see “no evidence of a peak before 2030” and an “undulating plateau for one or more decades before declining slowly”.⁶ They openly acknowledge that natural oil reserves are not “unlimited”. It should be noted that their projections include unconventional as well as conventional oil sources.

And the second is that the demand for energy, including oil, will surely continue to rise. Not merely are the economies of China and India growing quickly, but the world's population is expanding significantly. The UN expects the world's population to reach 8.0 billion in 2025 and 9.2 billion in 2050 compared with 6.1 billion in 2000, 6.5 billion in 2005 and just 2.5 billion in 1950.⁷ In the half century from 2000 to 2050, population is expected to increase by 3.1 billion – around 50% - most of which will be accounted for the rises in Africa (1.2 billion) and Asia (1.6 billion). 600 million of the increase is accounted for by India, the population of which is expected to overtake China's by 2025. These huge increases in population can only put pressure on the prices of all commodities – food, metals and water - as well as oil.

Taking these two reasons together, there is only one conclusion that can be drawn. Oil prices will remain high. The days of cheap oil as a source of energy have surely gone for ever.

References

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