

The logic of leaving oil in the ground

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What is behind the ever-increasing price of crude oil? Most economists and energy experts argue that even the current sky-high price is justified by fundamentals, namely the high growth in demand by emerging markets, in short ‘China’. The one key fact usually adduced to support this position is that supply and demand seem finely balanced as inventories are not increasing.

But this argument is wrong. The observation that inventories are not increasing is irrelevant since there is a very convenient way to store oil that is not measured by inventories data: just leave it in the ground! Many experts also stress the observation that, in spite of very high prices, production has not really increased (last year, for example, saw an increase by only 1 per cent). However, this argument, like the one about inventories, is wrong because it does not take into account the nature of oil as an exhaustible resource.

The key choice for any owner of an exhaustible resource, e.g. King Abdullah of Saudi Arabia, is only inter-temporal: extract today or extract tomorrow. If the King extracts today, he gets today’s price (minus the extraction cost). If he extracts tomorrow, he will get tomorrow’s price (minus the same extraction costs), discounted at today’s interest rate. The supply of oil today will thus increase only if tomorrow’s price is low relative to the price today.

In other words, the supply of oil will increase not when the price today is high, but only if suppliers expect that prices will be lower in future. This implies that China influences oil prices today not so much because Chinese demand is high today (China currently accounts for less than 10 percent of global consumption of crude), but because demand in China is projected to increase so much in the future, fuelling expectations of higher prices and thus leading producers to lower their rate of extraction today. In this light, it is no mystery that oil supply has not reacted to higher prices. Rational oil producers are just waiting for even higher prices tomorrow.

Another factor limiting oil supply today (and thus driving up prices) is that the return to oil producers from the dollars they would earn from increasing production has over the last year been greatly reduced by the US Federal Reserve. American interest rates are now negative in real terms. It is thus rational for oil producers to limit their accumulation of rapidly depreciating dollars by limiting the rate at which they extract oil. High oil prices are therefore at least partially a consequence of an expansionary monetary policy in the US.

When it comes to oil prices, and how much oil is produced today, it might be best to listen less to traders on commodity markets and more to the suppliers. King Abdullah has recently been quoted as saying that if additional oil were to be found in his country, he would advise leaving it in ground because “with the grace of God, our children might have a better use of it”.

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This suggests that suppliers have the impression that it is better for them to delay extraction.

The expectation that prices can only go up (and the fact that the return on capital remains low) is the real culprit, not the trading among speculators who are simply betting against each other so that one side's gain is the other side's loss. Regulating oil derivative markets might affect the amount of 'speculative' trading, but it will not induce oil producers to increase extraction.

If speculators are not to blame, does it follow that there is no bubble in the oil market? Not necessarily. A bubble starts when past price increases lead to expectations of future price increases. It could very well be that prices will not increase as much as expected if China's future demand for oil is lower than expected today, or if alternative energy supply sources become as cheap as some suggest. Sky-high oil prices are likely to lead over time to a massive substitution away from oil, even in China. This is what happened after the first two oil shocks. But it will take years for this scenario to materialise. In the meantime, the best explanation of oil prices is neither 'bubble' nor 'China', but a 'China bubble' – in the sense that speculators and oil producers are gambling on China sustaining high prices forever.