

Show and cartel

Economist Insights

OPEC is the most notorious of cartels, but as a cartel it has not been that successful. Members regularly over-produce, forcing Saudi Arabia to drive the price lower to punish those who cheat. But OPEC is not the only producer in the world, and even with last week's failure to reinforce cartel discipline, their ability to control oil prices is shrinking. Paradoxically, pushing the price lower may make their job harder in the future, not easier.



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Cooperation is generally considered a good thing. Unless, of course, the people who are cooperating are really not meant to do so. For example, in a free market producers are meant to compete: this keeps prices down and encourages innovation. When producers start to cooperate in their own interests, the costs to consumers are high: be it the Medellin drug cartel or the Organisation of Petroleum Exporting Countries (OPEC).

So it warms the heart of a free market economist to see OPEC apparently falling apart. The very group who were created to restrict supply so as to push up the price are pumping oil with wild abandon. But does this mean that the cartel is actually ineffective?

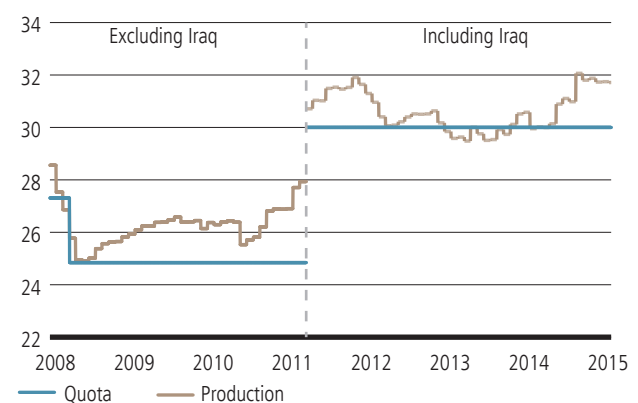
In the past OPEC quotas have been observed more in the breach than in the rule (chart 1), but this reflects the circumstances. As long as oil prices remained high, breaches of the quota were not a problem for the cartel. Or to put it another way, OPEC was not increasing its (flat) quota to keep pace with global demand. As long as demand was absorbing extra production it was all fine. But then extra production came online from elsewhere: US shale, Russia, even Brazil. All of a sudden it became important for members of OPEC to stop cheating.

Luckily enough, most cartels suffer from the prisoner's dilemma. If everyone agrees to keep production low so as to push up prices, each member of the cartel has an incentive to cheat; increasing production to gain market share and sell more at an elevated price. As this is rational for all of them, they all end up cheating and the cartel falls apart. It takes

something to stop them; usually some sort of punishment. In the Medellin cartel it usually took the form of a bullet. In OPEC it is in the form of lower oil prices.

Chart 1: Over-stepping the line

OPEC targets and OPEC production, million barrels per day



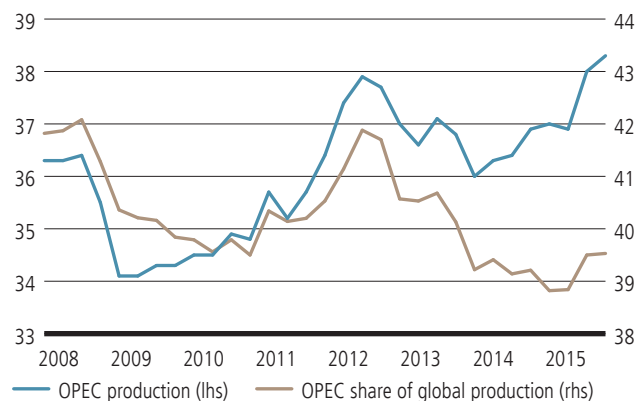
Source: OPEC, Bloomberg Finance LP.

Saudi Arabia, as the largest producer by far, enforces the rules. Saudi Arabia can increase production so much that the price of oil plummets. The other members of the cartel, including those who cheated, now lose out because the price drop outweighs their extra sales. It is painful for Saudi Arabia as well, but as the largest and richest producer they can withstand the losses for longer. The idea is that the long-term restoration of the cartel more than makes up for the short-term losses.

At least that is the idea. But for a cartel to truly function it needs to have a dominant market share. It also needs to be able to squeeze out potential new entrants. The rise of new entrants, such as US shale producers, has meant that despite OPEC production reaching new highs, their market share has actually shrunk (chart 2).

Chart 2: Running behind

OPEC oil production, million barrels per day, and share of global oil production %



Source: International Energy Agency

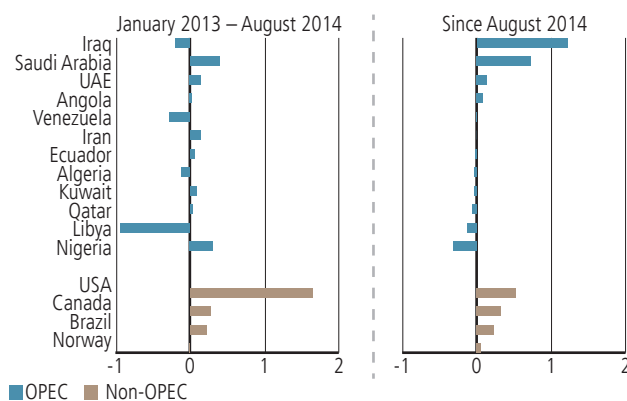
So one theory is that not only is Saudi Arabia attempting to control OPEC production, it is also trying to drive out the new entrants. In a classic case of predatory pricing, driving down the oil price is aimed at forcing the new entrants out of business. While the drop in oil prices undoubtedly had an impact on US shale (just look at what happened to energy stocks and high yield bonds), it has hardly stopped it. Since the oil price dropped, US oil production has still risen by half a million barrels per day (chart 3). This is about a third of the increase that was seen in the previous twenty months, but it's a rise nonetheless.

There are likely to be unintended consequences. When oil prices were high there was little pressure on new producers, such as US shale, to improve their efficiency. All they had to do was resurrect an old rig, then repurpose it to horizontal drilling, and they would still make money. So inefficient producers could still flourish, and hence the average cost of production looked high. But with the fall in the oil price the most inefficient producers are closing shop and some are going bankrupt. Their wells and rigs have been, and are still being, bought up by more efficient producers, who can now benefit from economies of scale and lower embedded costs of acquisition. In addition, these more efficient producers bring continuously-improving techniques, and built-for-purpose rigs, to the acquired properties. This also provides incentives to improve this relatively-young

technology even more. So the cost of shale production keeps dropping. And since so much capital has already been sunk into the extraction equipment and land rights, there is a huge incentive for even inefficient producers to continue producing, so as to recover some of that cost. These effects lower the improvement in market share which OPEC can achieve. Paradoxically, OPEC may have slowed short-term competition growth only to create a more aggressive competitor in the long-run.

Chart 3: Pump it up

Change in oil supply, million barrels per day



Source: Bloomberg Finance LP, US Energy Information Agency, Energy Intelligence

Further out the real threat to the OPEC cartel comes from technology rather than competition. If Saudi Arabia is successful in enforcing cartel discipline, prices will rise to well above the free market level. The excess profits encourage new entrants and improved productivity (at USD 120 per barrel you didn't need to be very efficient or large-scale to drill for shale). But crucially they encourage energy efficiency and alternative sources of energy. Restricting supply to make the oil you extract more expensive could ultimately end up making the oil you leave in the ground worthless.

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