

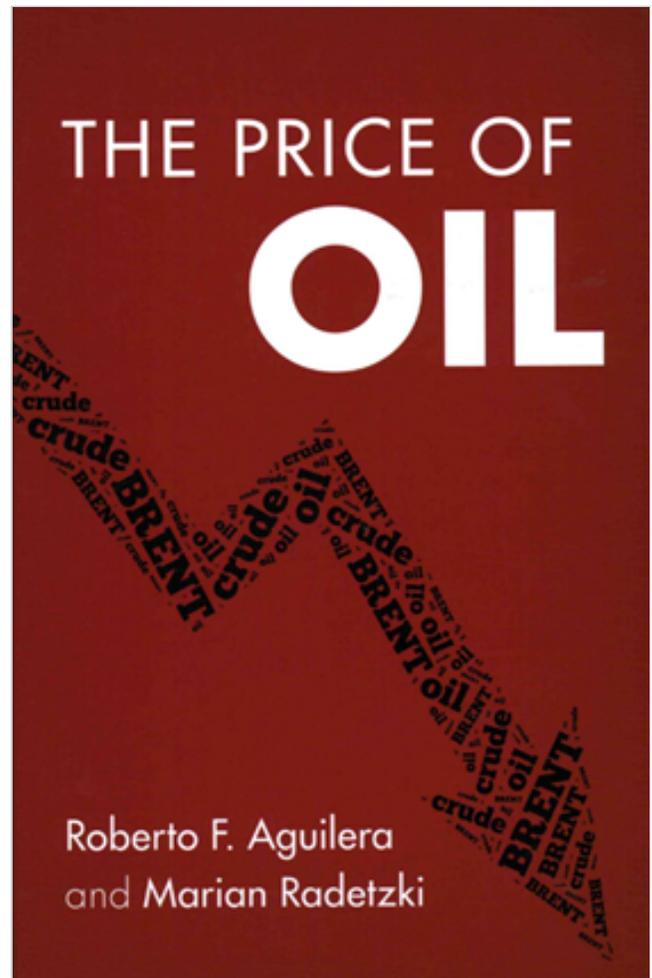
The future of oil prices: a break with the past?

The Price of Oil. By Roberto F. Aguilera and Marian Radetzki. Cambridge, U.K.: Cambridge University Press, 2015, 254 pp., \$37.99 paperback.

It is often held that the future of oil will be one of growing scarcity and rising prices. For it seems logical that, given oil's nonrenewable nature, rising energy consumption in developed and emerging economies alike will continually impinge upon available resource stocks, driving up the value of what's left in the ground. In the last few years, however, this neo-Malthusian picture of an oil-starved world has taken a backseat, with the price of petroleum falling by more than 40 percent in the second half of 2014 and remaining subdued thereafter. While this recent oil glut by no means constitutes a firm basis for drawing conclusions about long-term (or even medium-term) trends, it nonetheless opens the door to some intriguing questions: Does it represent a cyclical episode that would recede as the global economy eventually picks up steam and gives way to sustained price increases? Or is it a harbinger of long-term secular developments that would make lower oil prices the order of the day?

For those interested in these questions, Roberto Aguilera and Marian Radetzki's timely book *The Price of Oil* may be an engaging, thought-provoking read. The book contends, contra the conventional wisdom just recounted, that, despite impressive advances in the price of oil in recent decades, humanity is ushering in a new era of plentiful and cheap oil. Two themes anchor the authors' argument: the importance of supply-side mechanisms in countering petroleum scarcity and, related, the role of human technological ingenuity in enabling such mechanisms.

Aguilera and Radetzki do not take their task lightly. Their book, broken up into three parts, relies heavily on data,



Yavor Ivanchev

ivanchev.yavor@bls.gov

Yavor Ivanchev is an editor in the Office of Publications, U.S. Bureau of Labor Statistics.

previous research, and expert judgment to disarm the skeptical reader, moving seamlessly from the factual to the hypothetical and from times past to the future.

A recourse to history, the book's first part aims to trace and explain the steep rise in oil prices since the early 1970s. Aguilera and Radetzki's data suggest that, between that time and 2013, the real price of oil advanced by nearly 900 percent, an increase more than 10 times larger than that seen in the price index for metals and minerals. The authors rule out some popular and, in their view, inadequate explanations for oil's remarkable feat. Looking first at demand-side mechanisms, they dismiss financial speculation and consumption growth as significant factors in price change, pointing out that investor demand has been a weak mover of prices during commodity booms and suggesting that increases in oil consumption have been too gradual to generate a powerful price effect. The authors also discount two oft-cited supply-side factors—production cuts implemented by the Organization of the Petroleum Exporting Countries (OPEC) and oil depletion—showing that these factors have had small and, in the case of OPEC interventions, short-lived price effects.

Aguilera and Radetzki's explanatory alternative centers on what they call "an inadequate development of the capacity to produce," a supply constraint traced back to two historical developments: the widespread oil-industry nationalizations that took place in the 1960s and 1970s, and a number of domestic and interstate conflicts bred by the politically destabilizing effects of high oil rents (an aspect of the so-called resource curse). Although the nationalizations, which affected many oil-exporting countries in the developing world, put industry control in the hands of inefficient state-owned firms with little experience and a heavy fiscal burden, violent conflicts, such as the Iranian Revolution of 1979 and the Iran–Iraq War of 1980–88, disrupted the normal operation of major oil economies. Together, these developments arrested the expansion and efficient use of existing production capacity, severely curtailing global supply and exerting strong upward pressure on oil prices in international markets.

Having established the facts surrounding—and quite possibly the causes of—oil's past price performance, Aguilera and Radetzki set their sights on the future. In the book's second part, they maintain that, in coming decades, oil prices are likely to subside, reversing previous trends. As the story goes, this reversal will come not from any decline in oil demand—indeed, the authors concur with official projections pointing to a robust future demand—but rather from supply growth driven by revolutions in shale and conventional oil extraction. These revolutions, enabled by recent technological advances in horizontal drilling and hydraulic fracturing (fracking), have already started to tap, both cheaply and profitably, into vast, previously hard-to-exploit oil deposits in the United States. Aguilera and Radetzki note that, while the shale revolution has received considerably more media attention than the conventional revolution, the latter—which has the potential to harness large amounts of petroleum from tired conventional wells—is equally important to boosting future supply.

The authors acknowledge that the use of horizontal drilling and fracking, especially in shale-oil extraction, has caused environmental problems and is yet to establish a global footprint. However, they argue that these headwinds are due mainly to the infant state of the industry. In the United States, a number of technological breakthroughs, some already phased into production and some under development, have begun to address the most pressing environmental concerns. Coupled with efficient regulation, these breakthroughs, all transferable across countries, will drive down both the cost of extraction and environmental costs, making the global spread of the oil revolutions inevitable. Observing that the United States is in no way exceptional in the size of its shale resource base, Aguilera and Radetzki project that, between 2015 and 2035, non-U.S. oil production (due to the revolutions) will see an increase nearly double that of *global* production in the previous two decades, depressing

oil prices over the period. Price levels in 2035 are estimated in the range of \$40–60 per barrel (2013 constant U.S. dollars), at par with what we saw in late 2014.

In the third, final part of the book, Aguilera and Radetzki offer a brief assessment of how the projected oil cornucopia will intersect with broader macroeconomic, security, and climate-policy developments. The verdict for the world economy is, unsurprisingly, positive: cheaper oil, the authors suggest, should have a benevolent effect on global macroeconomic performance. However, because the oil revolutions will proceed at a gradual pace, over the course of decades, this effect will be difficult to quantify and will remain largely unnoticeable. With respect to future security and military developments, the picture is somewhat more complex. On the one hand, depressed oil prices will curtail the budgets of traditional oil exporters, possibly creating domestic discontent over unmet demand for public services and spending. On the other hand, a significant drop in the oil rent, together with a geographically diversified oil supply, will take the wind out of the sails of the resource curse, diminishing the prospect for violent oil conflict.

Perhaps the most interesting, and potentially controversial, aspect of Aguilera and Radetzki's concluding account is their discussion of climate policy. The authors note that a deep climate policy—one defined as requiring global carbon emission cuts of 30 percent by 2035—would spell an early demise for the oil revolutions. However, they are skeptical that such an ambitious regulatory regime is viable. Indeed, a number of indicators, such as recent investment growth in the oil industry and a history of feeble climate policy agreements, suggest that it is not. What is more, a global decoupling from oil would involve massive costs, and the political will to incur these costs, which will have to be borne by taxpayers, is simply not there. The major oil producers and polluters also are developing countries whose top priorities lie with economic development rather than environmental action. Against the backdrop of all this, the authors judge that we are likely to see “no more than a superficial climate policy in the foreseeable future, with our projected revolutions proceeding by and large unhampered.”

Should one buy Aguilera and Radetzki's story? Ultimately, it's up to the reader to decide. Every projections exercise involves a fair amount of speculation, and that laid out in *The Price of Oil* is no exception, especially when it comes to assumptions about future regulatory conditions. Still, the believability of a story depends on the ability of those telling it to advance a coherent argument and, to the extent possible, marshal empirical evidence to inform it and back it up. Aguilera and Radetzki, both experts in resource economics, are arguably on the mark in that regard. If nothing else, their book opens a debate—not only about what will happen to the price of oil, but also about the broader economic, political, and environmental ramifications of that development.