## BOOK REVIEW

***Oil and the Economy: Recent Developments in Historical Perspective***, a special issue of *The Quarterly Review of Economics and Finance* (Vol. 42, No. 2), edited by JAMES L. SMITH. (New York: Elsevier Science Inc., 2002). 259 pages. ISSN: 1062-9769

This special issue of the *Quarterly Review of Economics and Finance*, the journal of the Midwest Economics Association and the Midwest Finance Association, contains 13 invited papers on the topic of oil and the economy. Papers discuss both supply side and demand side issues, with a heavy emphasis on the US economy.

James Smith, the editor of this special issue, introduces the papers as "some of the best current research on the world oil market, the strategies of those who participate in it directly, and the implications of their actions for other sectors of the broader world economy." This oversells the issue to some degree. Some of the papers are not research at all, but simply narratives describing world oil markets. Others include research of only mediocre quality; the papers, as far as I can tell, were not refereed. That said, the issue does provide a current snapshot of the way energy specialists are thinking about oil markets, and there are even a few comments on a post 9/11 world.

The issue begins with the standard introductory comments by the editor. I usually skip these introductions, but found James Smith's introduction to be quite fascinating. He uses his few pages to outline his take on the emergence of energy economics as a field of study, which he largely credits to OPEC's rise to prominence in the early 1970s. That rise led to increased oil price volatility, something that has made energy economics important, and price volatility appropriately receives mention in almost all of the papers in this issue.

The first six papers are a series of opinion pieces by industry authorities. Morris Adelman provides the first paper in the issue, reviewing oil markets from 1947-2000. This is a rambling, terse paper typical of those by Adelman, admittedly drawing on his previous work. Without knowing his previous work the reader would be hard pressed to understand the logic or reasoning behind many of the abbreviated ideas contained in this article. Macroeconomists Stephen Brown and Mine Yücel then provide a survey of studies linking energy price movements to aggregate economic activity. They raise an issue that is discussed repeatedly in this special issue, the inverse relationship between oil prices and aggregate economic activity in the 1970s that changed to a proportional relationship in the 1980s and 1990s. With both authors housed at the Dallas Federal Reserve Board, they suitably end with some brief comments on macro policy, suggesting that more research into the state of oil/economy channels must be done before economists can provide

advice as to how much policymakers ought to intervene in preventing oil price shocks.

Wilfred Kohl provides an article that reads like OPEC's diary during the 1998-2001 period. He emphasizes, as does Adelman, the clumsiness of the cartel, overshooting and undershooting its production and price targets with regularity. He opines that it is politics, rather than some long-term strategy of maximizing monopoly rents, that drives OPEC's production decisions, but provides no model or data to support his hypothesis.

Bielecki provides the first of two papers that look at energy security, a topic that has faded from prominence since the 1970s. Energy security, with its main policy tool being strategic stockpiles, is a public good that will tend to be under-supplied by the market. Bielecki advocates increased governmental stock holdings and increased diversification of supply, as well as international legal frameworks guaranteeing energy transit. The current energy security system works, in his opinion, but additional precautions need to be taken. Again, though, the paper provides no analytical support for its conclusions, and the concept of a cost/benefit analysis of additional state-supplied security measures is never brokered. Jaffe and Soligo do a better job of analyzing this same oil security issue later in the issue, and I would encourage readers to skip Bielecki's paper and go directly to Jaffe and Soligo, who at least provide some cost/benefit ideas grounded within an economic framework.

John Mitchell adds a weak paper on the political economy of oil, focusing on the acceptability, rather than availability, of oil as an energy source. The paper has lots of other bits and pieces about oil and oil markets thrown in, mostly repeating what other authors in the volume cover. His paper could have been more usefully devoted to other political economy issues, and especially the issues related to oil, governance, and the resource curse, which is a hot topic in the political economy and political science literature.

Roger Olien ends this series of narrative papers with a discussion of how the oil industry has changed in recent years, and how this impacts oil regulation. Volatility, reorganization, down-sizing, and globalization of the petroleum industry present new challenges for US regulators. In fact, Olien suggests that future energy policy may involve less, rather than more, regulation of the industry. Unfortunately, he says nothing about the 2001 National Energy Policy report by Vice President Cheney, even though that document is discussed in other papers in this issue.

This ends the first section of the special issue. The six papers provide a historical perspective for current energy markets, but with much overlap and verbosity. They also contain many annoying, unsupported statements,

such as "The oil futures market…can add to [oil] price volatility" (Kohl, 231). Robert Weiner, in a paper later in the issue, takes issue with such statements: "The answer [to whether or not futures markets destabilize commodity markets] cannot be determined without evidence, which does not prevent analysts from holding strong views on the subject" (395). In fact, Weiner provides empirical evidence that speculation in futures markets is unlikely to be the driving force behind oil price volatility. Another example of unsupported opinion is found in Brown and Yücel's paper: "Oil price volatility seems harmful to economic activity" (203). My reading of the literature finds that the impact of commodity price volatility on economic growth is equivocal.

The next seven papers move on to some original research. David Ryan and André Plourde look at own-price elasticity of nontransport oil demand. Their goal is to explain why US per capita oil consumption fell as prices fell in the late 1980s. They propose that capital replacement in the 1970s locked in fuel-efficient technologies that were not swapped out again for less efficient technologies in the 1980s. Demand elasticity, in other words, is path dependent, with elasticities in the 1980s being impacted by price movements and investment responses to those movements in the 1970s. Current nontransport elasticities appear to be near zero, with the policy implication that increased oil prices, either due to market forces or policy instruments, will do little to curtail nontransport oil consumption.

Kevin Forbes and Ernest Zampelli continue the empirical work in this issue by updating their 2000 study looking at technology and the exploratory success rate for offshore US oil. Here, they look at exploratory success for onshore US oil. Are recent increases in the average success rate for onshore oil a result of a technology shift, or a result of the juniors narrowing the technology gap between themselves and the majors? Forbes and Zampelli find that technology is advancing, and that this is the main reason for increased success in exploration, even in the face of declining oil prices and the consequently higher likelihood that drilling will uncover uneconomic resources. That is, technology advances are substantial. The main problem with the paper is that technology is measured as a kind of "Solow residual," and so one cannot be sure that increasing exploratory success is not, rather, due to some unmodeled factor.

Campbell Watkins adds a nice paper on oil reserve appreciation in the North Sea. Using a sample of 126 young developed fields, he finds that initial reports of recoverable oil substantially underestimate oil ultimately recovered from these fields. For UK oil wells, the increase is due to increasing estimates of oil in place, while for Norwegian oil wells the increase is due to increased recovery factors. Watkins finds reserve appreciation factors of between 20% and 50%. In my mind, the interesting implication of this work is that initial reserve valuations will be biased downward unless the reserve appreciation is taken into account. This is in keeping with Moore (1998), who showed that, for surface mining, reserve appreciation explains most of the gap between reserve valuations using traditional valuation techniques and the assets' actual market values. My one complaint with Watkins' work is that he does not attempt to compare his

results with those of Soladay (1980), who found that initial reserve estimates for oil will appreciate by 706%!

"The history of oil market forecasting has been a sorry one," writes Michael Lynch at the beginning of his article on the theory and practice of oil price forecasts. The paper takes more time to discuss practice rather than theory, but it is nevertheless a fascinating window into why oil price forecasts are consistently biased high. Lynch is critical of forecasts made by Hubbert and Campbell, and sides with Watkins and Forbes and Zampelli in specifying that supply continues to offset depletion and consequent price rises because of increased technical skill in finding and recovering oil.

The special issue ends with Hendrik Houthakker's brief arguments as to whether minerals are exhaustible. Much has been written on this question in recent times (e.g., Tilton 2003), and yet the story, at least by economists, tends to remain the same over the decades: by their finite nature, minerals are exhaustible, but they will never be exhausted because substitution away from mineral use will happen long before physical exhaustion. Houthakker restates this logic, interestingly finding no need to cite references later than 1974.

Overall, the issue contains both useful and not-so-useful papers on the current state of oil markets. The issue could have used closer editorial supervision. Some of the papers have abstracts, others do not. Some list references, others include the references in the footnotes. I spotted at least a dozen typographical errors, some important, such as inconsistencies as to the actual dates of data series.

Despite the repeated mention in many of the papers of increasing oil price volatility and its policy implications, the issue contains no empirical papers examining oil price paths in particular, and yet the empirical finance literature has made substantial strides in this area. Overlap is also a problem, and aside from Lynch, it does not appear that any of the authors read the other authors' drafts prior to publication. Greater linking of the papers, with the authors agreeing or disagreeing with each other, would have made the issue more concise and more cohesive.

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## References

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