

ISSUE BRIEF

Recalling the Oil Shock of 40 Years Ago

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Introduction

One would have to be a committed contrarian to downplay the seriousness of the worldwide oil-price shock of 1973–1974, currently being recalled in both popular media and specialized publications.² For, without question, the virtually unprecedented and precipitous more-than-threefold increase in the real price of a barrel of oil (imposed in several stages within a few months) produced not only significant near-term economic damage in the United States and elsewhere but also intense policy concerns about the implications for future vulnerability of energy-dependent societies.³ (Throughout this paper, prices are expressed in constant 2012 dollars.) By 1980, those concerns came to be reinforced by market turmoil associated with the Iranian Revolution. But this Issue Brief focuses largely on the earlier events.

Background on the Crisis

It may be useful to start with a brief recap of at least the key elements associated with that upheaval of 40 years ago. No

Key Points

- "Commemorative" coverage of the 1970s oil crisis has tended—inaccurately—to conflate the embargo with the dramatic price increase. The two elements differed markedly in substance and effect.
- Underlying conditions of demand and supply were primary drivers in unfolding developments. Evidence of supplier-engineered production cuts is tenuous.
- Benefits in moving from acute oil import dependence (then) to prospective energy independence (now) should not be overdrawn. There are limits to America's ability to shield itself from global energy turmoil.

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²For worthwhile retrospective discussions, see G. Luft and A. Korin, "The Myth of US Energy Dependence." *Foreign Affairs*. 15 Oct. 2013. Web. 18 Dec. 2013. <http://www.foreignaffairs.com/articles/140172/gal-luft-and-anne-korin/the-myth-of-us-energy-dependence> and F.A. Verrastro and Guy Caruso, "The Arab Oil Embargo—40 Years Later," Commentary (Center for Strategic and International Studies), Oct. 16, 2013. For a good chronological account of events, see A.F. Alhajji, "The 1973 oil embargo: Its history, motives, and consequences," *Oil and Gas Journal* 103, no. 17 (2005): 24–25.

³ Volatility in world oil prices, as in the case of most natural resource commodities, has been the historical norm. That said, even by the yardstick of virtually the entire twentieth century, the 1973–1974 spike was unique.

episode of turbulence in the Middle East exists in isolation from what has gone before and is likely to recur. That said, the oil shock's precipitating genesis was the outbreak, on October 6, 1973, of the 20-day Yom Kippur War. This conflict, the fourth Arab–Israeli war in 25 years, began with a coordinated attack by Syria and Egypt in an effort to reclaim lands lost to Israel during the 1967 Six-Day War.

The October outbreak of hostilities was followed by two events—the first was political and, as it turned out, largely symbolic; the second was economic. First, in October 1973, the Arab–Israeli conflict prompted a group of Arab oil producers (the Organization of Arab Petroleum Exporting Countries) to institute a selective embargo on oil exports. The second development was a collective decision by member countries of the Organization of Petroleum Exporting Countries (OPEC) to raise the price of oil.

Although it would seem important to distinguish between the embargo and the oil-price escalation, a surprising number of commemorative accounts have conflated the two into a single phenomenon. (Even the *Foreign Affairs* article cited in note 2 carries the subtitle, “What We Got Wrong about OPEC’s Oil Embargo.”) With particular attention to their respective effect on harm to the world economy, I consider the two events in turn.

Distinction between the Embargo and the Price Increase

The embargo, by far the easier issue to consider, was conducted by a somewhat shifting group of Arab oil exporters that embraced a somewhat ambiguous set of goals during its relatively brief six-month existence. (The embargo was formally terminated in March 1974.) In essence, it targeted the United States and the Netherlands with oil-delivery shortfalls as a protest against the two nations’ presumed support of Israel. Yet, to demonstrate the achievement of this objective—or that of any embargo—one would need to find statistical evidence of manipulated and extended export restrictions. No such evidence exists, notwithstanding an embargo announcement, pledging supportive output reductions. Several major non-Arab oil producers (and OPEC members)—among them Venezuela and Iran—failed to join the embargo. In addition, all indications suggest that an effective rerouting of world oil flows spared the intended targets any major disruption in supply. These logistical responses, though no doubt entailing some added transportation costs, are separable from the genuine damage inflicted by the steep rise in oil prices. In short, it is hard not to view the embargo as a largely symbolic and limited expression of political sympathy by Arab oil producers.

If, judged by its futility, the embargo was mostly a token gesture, the dramatic rise in the oil price—in its threat to, and quickly confirmed impact on, the world economy—was anything but. To probe how the world demand for and supply of oil came to intersect and settle at such a

dramatically higher price, one needs to explore the degree to which shifting consumption, production, or both represented the principal driver of change. In fact, a good case can be made that both factors did indeed play an important role. One conspicuous thrust on the demand side came from the United States, whose rapidly expanding oil needs in the years leading up to the oil shock also translated into sharply rising import dependence: the country's net oil import dependence rose from 22 percent in 1965 to 37 percent in 1973. Another cause on the demand side—one that is harder to document but has been cited as a likely contributory factor—was aggressive inventory buildup motivated by a tense and rapidly worsening political situation in the Middle East.

The weight assigned to supply-side developments is somewhat more problematic. With OPEC rightfully viewed as a quasi-monopolistic entity, it is not unreasonable to look for evidence of engineered shortages—particularly as manipulated by OPEC's leading producer, Saudi Arabia—to ensure viability of the higher price. Whether Saudi Arabia, in fact, possessed and deliberately withheld a volume of producible spare capacity sufficient to support the new price level is certainly a plausible, but hard-to-prove, contention. What is clear from Table 1 is that OPEC production overall, and Saudi production in particular, was maintained at essentially unchanged output levels over the course of the Yom Kippur War and for some time beyond.⁴

Few Available Policy Responses

Several subsidiary factors played a part in both the demand-side and supply-side scheme of things. The persistence—into the Yom Kippur War period—of US oil price controls (dating from the first term of the Nixon administration) precluded any new US crude oil production from realizing the sharply higher prices fetched by imported oil. (In 1974, US refiners paid \$23 per barrel for domestic crude compared with \$41 for imported crude.) Unsurprisingly, this disincentive to expand output contributed to an “artificial” supply shortfall that was a nontrivial factor in the lengthy gas station lines that remain among the more memorable features of that period.

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⁴ See Douglas Bohi and Joel Darmstadter, “The Energy Upheavals of the 1970s: Policy Watershed or Aberration?” in *The Energy Crisis: Unresolved Issues and Enduring Legacies*, ed. David Feldman (Baltimore, MD: Johns Hopkins Press, 1996). This chapter, derived from a 1994 presentation at a University of Tennessee conference, concluded that, “[w]hile the common perception is that OPEC engineered the whole thing, facts do not support that perception” (p. 55). To be sure, the authors of the *Foreign Affairs* article (note 2) assert that “[w]hat really happened was that key members of OPEC took advantage of geopolitical events to shift to a lower level of supply and send prices up to a more just level. In total, five million barrels per day were withdrawn from the market ...” (Luft and Korin, “The Myth of US Energy Dependence”). The most likely explanation for the discrepancy between the latter statement from the *Foreign Affairs* article and the former quote from the 1996 book is that a short-lived output reduction in November 1973 was insufficient to change the year-on-year constancy in supply recorded here in Table 1.

Did the United States have at hand other policy options that could have moderated the economic fallout from the oil shock? With the substantial outflow of dollars to overseas producers, more stimulative monetary expansion might have compensated for shrinking levels of domestic purchasing power and eased the depressed state of economic activity. But concern with managing the lingering inflationary legacy of the Vietnam War posed a concurrent, but conflicting, policy challenge. Given the US price level growing at around 4.5 percent yearly, even with stagnating gross domestic product during 1973–1975 and an unemployment rate rising from 4.9 to 8.5 percent over those years, the oil-induced recession evidently took a backseat to the priority accorded to the need for monetary restraint.⁵ Although circumstances outside the US varied, few countries were spared significant economic stress. In both Britain and Germany, for example, GDP stagnated for three years running.

Table 1. Oil Production, Consumption, and Price at the Time of the Oil Crisis

	1970	1972	1973	1974	1975
Oil production (mbd)					
United States	11.3	11.2	10.9	10.5	10.1
OPEC	22.8	26.4	29.9	29.7	26.2
<i>Saudi Arabia</i>	3.9	6.1	7.7	8.6	7.2
<i>Venezuela</i>	3.8	3.3	3.5	3.1	2.4
<i>Iran</i>	3.8	5.1	5.9	6.1	5.4
<i>Other</i>	11.3	11.9	12.8	11.9	11.2
Rest of world	14.0	16.1	17.7	18.4	19.5
World total	48.1	53.7	58.5	58.6	55.8
Oil consumption (mbd)					
United States	14.7	16.4	17.3	16.6	16.3
Rest of world	30.8	35.2	38.4	38.3	38.2
World total	45.5	51.6	55.7	54.9	45.5
Price per barrel (2012\$)	10.64	13.61	17.00	53.94	49.21

Notes: mbd = million barrels per day; production refers to crude oil; consumption, to all oil-derived refined products.

Source: *BP Statistical Review of World Energy 2013* (London: BP, 2013), Excel worksheets, 1951–2011.

Lessons and Some Cautionary Reflections

Following the oil-price shock of 1973–1974, the balance of the 1970s saw prices steady at around \$50 per barrel. But then, with the outbreak of the Iranian Revolution, the earlier shock

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⁵ In its initial impact, the severity of the oil price increase can easily explain the “forfeiture” of annual growth in gross domestic product of no less than 2 percent that might normally have occurred during that period.

was powerfully reinforced, with prices doubling to \$100 per barrel in 1979–1980.⁶ (It took until the mid-1980s for the price to slide to the \$30 range.)

Taken together, the two events produced a number of important lessons—some more tangible and positive than others. Among the well-grounded legacies is the extent to which the energy turmoil experienced in the 1970s helped set the nation on a course of steadily rising energy efficiency. This increase in energy efficiency occurred principally in the use oil, but was apparent in other forms of energy as well; transportation, household appliances, and electric generation were among the sectors benefiting from that development. The less energy-intensive the economy, the more resilient to new energy shocks.

Freer energy market conditions were another positive, if indirect, outcome of the oil shock. The stultifying and perverse impact of price controls would have deserved attention even in the absence of disruptive market turmoil, as in 1973–1974. But it is reasonable to surmise that their damaging effect in the oil shock helped spur the staged removal of oil price controls between 1979 and 1981 and, more broadly, served to discourage such regulatory intervention as a major line of defense in future energy and economic upheavals.

Accompanying the emerging mindset on energy issues was the intensified focus on research and development and on technology. At the same time, some of the incipient federal policies represented questionable, almost impulsive, efforts to push commercialization—“picking winners” in popular parlance—with such projects as the short-lived, federally-chartered Synthetic Fuels Corporation, whose core thrust was to demonstrate coal liquefaction, and whose surreal target, in the interest of national security, was production of several million barrels of crude-oil equivalent within a decade; and the US Department of Energy–supported Great Plains Synfuel Plant in North Dakota, whose production of synthetic gas from lignite was unprofitable.⁷ While neither of these efforts tends to be viewed as a viable model of federal promotion of commercialization, the government’s more successful role since the 1980s has been intensified support of basic energy research and subsidies targeting renewable energy systems with more near-term promise.

On a sustained parallel course—though not propelled directly by the oil shock experience—the private energy sector was en route to striking advances in petroleum exploration and development. Notable examples include seismic exploratory techniques, horizontal drilling, and

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⁶ That was the highest price per barrel since the \$118 price recorded in 1864.

⁷ Fairness demands recording comparable setbacks in concurrent private-sector initiatives. Notably, Exxon invested hundreds of million dollars in an unsuccessful attempt, in Colorado, to produce synthetic liquids from the organic compound kerogen found in rock confusingly called “oil shale” but entirely different from the “shale oil” bonanza in North Dakota’s Bakken deposit.

the steadily increasing depth of offshore production. Coupled with major and more recently emergent shale gas and shale oil plays, that momentum shows no early sign of letup.

No matter the extent to which the steps I discuss here stand to help immunize the economy to recurrent external shocks, vulnerability inescapably persists. Thus, in 1975, Congress authorized the creation of the US Strategic Petroleum Reserve, which now stores 700 million barrels of crude oil and, if deployed prudently, represents an important tool to allay shortages and calm markets in periods of disruption.

A somewhat more blurred legacy of the oil shock trauma is the degree to which it has seemed to invigorate the ideal of “energy independence” and, as an important by-product, America’s national security. Over the decade leading up to, and in the wake of, the 1973–1974 and 1979–1980 shocks, the country’s self-sufficiency in fuels has been invoked as a bulwark against externally caused turmoil.⁸ Within that almost reflexive mindset, the country’s successful expansion of gas and oil reserves and production has led to an almost palpable and collective sigh of relief over the prospect of now being shielded from a recurrence of economically ruinous energy shocks from abroad.

But lurking as a kind of backdrop to that feeling of relief, one catches a whiff of growing political pressure discouraging any readiness to share these newfound riches with the rest of the world. Why risk renewed import dependence after having achieved a goal pursued so persistently and passionately over the years? Far better, some inward-looking legislators argue, to preserve restrictions against crude-oil exports enacted in the oil-shock period. Roger Sedjo and I have recently looked at the energy independence–security nexus in a series of blogs that emphasize America’s inescapable vulnerability to conditions and upheavals on world energy markets, even as we recognize significant and unalloyed benefits to the country from an expanding, indigenous resource base.⁹

Unquestionably, enhanced profits to domestic firms, expanded job opportunities, some reversal from offshoring back to the United States in the location of investment in energy-intensive manufacturing—these are components of that new environment. And in a less tangible respect, recourse to a domestic (or, for that matter, North American) barrel of oil that equals, or substitutes for, a barrel originating in a geographically unstable supply source is an achievement not to be taken lightly.

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⁸ President Nixon’s launch, in November 1973, of “Project Independence” (also a catchphrase and the title of a federal report) was one of the more illusory expressions of that goal.

⁹ See <http://common-resources.org/2012/energy-independence-what-then-part-one-the-centrality-of-oil/>.

In the final analysis and in a broader perspective, however, the benefits of a coherent multilateral energy trade and investment network has a lot more to commend itself than a regime hewing to a revived embrace of autarchy. Arguably, such a mutuality of interest may become ever more critical as the urgency of facing up to global warming and other environmental realities begin increasingly to be seen as intimately linked with global energy trade and development strategies.¹⁰

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¹⁰ Disputes over exports of low-priced US liquefied natural gas to overseas markets facing vastly higher prices are in full swing even now. Concurrently, a proposed expansion of US coal exports has aroused opposition from groups fearing intensified carbon dioxide emissions. See Joel Darmstadter, "The Controversy over US Coal and Natural Gas Exports," Issue Brief 13-01 (Washington, DC: Resources for the Future, 2013), www.rff.org/Publications/Pages/PublicationDetails.aspx?PublicationID=22146.