Cato Institute Foreign Policy Briefing No. 4: Do We Need to Go to War For Oil?

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Executive Summary

President Saddam Hussein of Iraq has no qualms about torturing or even murdering innocent people. If he should manage to hold on to Kuwait and to capture Saudi Arabia, he would have access to even greater wealth than he has in Iraq. No doubt, he would attempt to use that wealth to strengthen his military, maybe even to speed up development of nuclear weapons. Saddam could then be an even bigger menace to peace in the Middle East than he was before he invaded Kuwait.

But many Americans--including President Bush, Secretary of State James A. Baker III, and former secretary of state Henry Kissinger--believe that if Saddam succeeds in extending his control to a large part of the Arab world, he could pose a direct threat to the United States by severely damaging our oil-dependent economy. President Bush has stated that his military action in the Persian Gulf is about "access to energy resources that are key . . . to the entire world." Bush claims that if Saddam gets greater control of oil reserves in the Middle East, he can threaten "our jobs" and "our way of life."[1] Baker claimed that Saddam, by controlling much of the world's oil, "could strangle the global economic order, determining by fiat whether we all enter a recession, or even the darkness of a depression."[2] And Kissinger wrote that an unchecked Saddam would be able to "cause a worldwide economic crisis."[3]

Bush, Baker, and Kissinger are mistaken. The annual cost to the U.S. economy of doing nothing in the Persian Gulf would be at most half of 1 percent of our gross national product, and probably much less. Saddam's vaunted "oil weapon" is a dud.

Saddam cannot single-handedly cause shortages and gasoline lines. Only the U.S. government can do that. As long as our government avoids imposing price controls, any cutback in supplies that Saddam causes will result in higher prices, not shortages. That is the lesson to be learned from the 1970s. Countries, including the United States, that imposed price controls experienced shortages, and many Americans were angry because they had to line up, Soviet style, for gasoline.[4] Countries, such as West Germany, that avoided price controls made it through the 1970s with no gasoline lines.[5] That is no surprise. If governments let oil prices rise, people cut down on marginal uses of oil but continue to use it where it is most valuable. They take fewer trips to stores and fewer driving vacations, for example, but continue to drive to work. People insulate their houses and close off unused rooms. Airlines drop marginal flights. Utilities switch from oil to coal and natural gas when oil becomes too expensive. In 1973, the last year of low oil prices, utilities in the United States used 3.515 quadrillion Btu of oil. By 1983 they had reduced their use of oil to 1.544 quadrillion Btu, a reduction of 56 percent.[6] Oil users make literally thousands of adjustments that--voila--cause the amount they consume to just equal the amount supplied. The market works.

Of course, Saddam does not have to create gasoline lines to hurt us. Simply by raising the price of oil, a good we

import in large quantities, he can hurt the U.S. economy. But how much would a price increase hurt us? Let's look at the numbers.

Take the worst case that has any plausibility whatsoever. Assume that Iraq not only holds on to Kuwait but also is able to grab and keep Saudi Arabia and the United Arab Emirates. Iraq would then control virtually all Middle Eastern oil production except that of Iran. Those fields had been producing about 12.3 million barrels per day (mbd) before the price run-up in late July. But, although Saddam may be evil, he is not stupid. He does not want to grab the oil fields only to let them sit idle. He wants them so that he can sell their oil. Saddam would surely continue to produce and sell oil from those fields if the U.S. government and other governments let him. If he continued to sell 12.3 mbd, the effect of his actions on the world price of oil would be zero. Oil would sell for the precrisis price of about $20 per barrel.

However, Saddam would not necessarily sell the same amount of oil. He would have a much tighter grip on the OPEC cartel, whose members have kept oil prices low by producing more than their agreed quotas. By controlling the output of the four major cartel members, Saddam would gain some degree of monopoly power and could use that power to cut the combined production of the four members and drive up the world price.

How much monopoly power would Saddam have? More than he had, but not necessarily a lot. Remember that Saddam is operating in a market in which world output is about 60 mbd. A reasonable estimate, therefore, is that he would use his newly acquired monopoly power to cut output from 12.3 mbd to a minimum of 8.3 mbd, which is probably the profit-maximiz- ing level of output.[7] That would amount to a 6.7 percent cut in world output. Because, in the short run, demand for oil is fairly inelastic, small cuts in production can cause large increases in world prices. According to an estimate by Derriel Cato of the U.S. Department of Energy's Energy Information Administration, the short-run elasticity of demand for oil is about -0.15.[8] In other words, a 10 percent increase in price causes a 1.5 percent decrease in the quantity of oil demanded. Conversely, a 1.5 percent decrease in supply causes a 10 percent increase in price. With an elasticity of -0.15, a 6.7 percent cut in world production causes about a 50 percent increase in price. The precrisis price was $20 per barrel, so we can conclude that, absent U.S. military intervention, the price of oil would have risen to only about $30 per barrel.

How much would such a price increase cost the United States? Before the crisis, we imported about 8 mbd. A price increase would lead us to cut our imports as well as our consumption and to increase our production. But assume pessimistically--and contrary to common sense and evidence-- that we would continue to import 8 mbd. The cost of those imports would then rise by $80 million per day, or $29.2 billion per year.

Twenty-nine billion dollars is not small change, but it is only about half of 1 percent of our $5.4 trillion GNP. A loss of half of 1 percent of GNP is surely not what Kissinger had in mind when he referred to an "economic crisis." The cost per American would be only about $112 per year. At the gasoline pump, the cost would show up as an additional 24 cents per gallon. And that's on top of the old price of about $1.09 per gallon, for a total of about $1.33, a bit less than we're paying now.

Consider, by contrast, the costs of war. Sending troops to the Persian Gulf has not been cheap. Secretary of Defense Richard Cheney estimates that the cost of sending extra troops to the gulf and keeping them there will total $17.7 billion by the end of September 1991.[9] That is in addition to our regular spending to protect the gulf, Southwest Asia, and Northwest Africa, which one expert has estimated at $46 billion in fiscal year 1990.[10] And our military costs will get much higher, in money and lives, if shooting starts. Some experts believe those costs could reach $1 billion a day.[11] Remember also that added military spending does not guarantee success. All it guarantees is our continued presence in the gulf.

Moreover, we can be sure that as a result of the U.S. intervention, less oil will be produced--because the UN embargo, enforced mainly by the United States, assures that no Iraqi or Kuwaiti oil can be sold. With the embargo, President Bush is keeping about 5 mbd of Iraqi and Kuwaiti oil off the world market. Note the irony here. The alleged purpose of U.S. intervention in the gulf was to preserve "our jobs" and "our way of life" by keeping oil prices low. But the one sure result of U.S. intervention is to keep them high. President Bush is doing as a matter of policy what he feared Saddam might do.

If we do go to war, oil production in the Middle East is very likely to fall even further, sending prices even higher.

Bringing oil to the surface is difficult when guns are being fired all around. In fact, the recent rise in oil prices to $38 per barrel could well have been due to the mere anticipation of an even smaller supply of oil if war breaks out. If war became certain, the price of oil would probably exceed $38 per barrel. Again, note the irony. By doing nothing in the Persian Gulf, we can keep the price of oil lower--$30 per barrel or less--than we can by doing something. So a cost-benefit analysis that considers only some of the costs of military action shows that military action in the gulf is more expensive than inaction. Taking the full cost of military action into account makes the case for inaction even stronger.

Finally, all my estimates of the damage that Saddam can do are for the short run. The annual damage he could inflict on us would get smaller the longer he restricted oil production. As the price of oil increases, other oil producers will produce more; indeed, that is already happening. Moreover, according to energy economists Arlon R. Tussing and Samuel A. Van Vactor, when the price of oil goes above $20 per barrel, substitutes for oil--particularly natural gas--become economically feasible. That is not just idle speculation. According to Tussing and Van Vactor, there is no large-scale use of petroleum liquids or of any other primary fuel that cannot also be served by natural gas or methane or other derivatives that can be produced at a comparable cost.[12] Even automobiles can run on alternative fuels. For instance, a substantial portion of the taxicabs in Vancouver and Calgary run on liquid fuel derived from methane, and a large fraction of cars in New Zealand run on compressed natural gas--and their owners receive no special subsidies or tax breaks. A conversion kit for an automobile costs about $1,600, but the alternative fuel costs are equivalent to 70 cents a gallon for gasoline.

Moreover, according to the Oil and Gas Journal, reserves of natural gas outside the United States and Canada were equivalent to 80 years of production at the end of 1989. Throughout the 1980s, additions to natural gas reserves were three times annual production.[13] In short, natural gas is a good substitute for oil, is already being used as such, and is in abundant supply. Those facts are presumably what have prevented the OPEC cartel from raising the price of oil above $20 per barrel for more than short periods of time in recent years. And none of those facts change if Saddam replaces the Saudis as the dominant actor in the OPEC cartel. His long-run interest, therefore, is to sell the United States just enough oil to keep us from making irreversible investments in alternative fuels. Whoever runs the cartel will not set the price much above $20 or will suffer as a consequence.

Whatever other justifications there may be for war with Iraq, cheap oil is not one.

Notes

A shorter and less complete version of this briefing appeared in the Auqust 29, 1990, Wall Street Journal.

[1] Quoted in Richard Harwood, "War--or Folly--in the Gulf?" Washington Post, September 2, 1990, p. B6.

[2] Quoted in Gerald F. Seib and Robert S. Greenberger, "Bush Wants U.S. to Forgive Egypt Debt; Prolonged Presence in Gulf Is Indicated," Wall Street Journal, September 5, 1990, p. A3.

[3] Henry Kissinger, "America Has Crossed Its Rubicon in the Middle East," Los Angeles Times Syndicate, August 19, 1990.

[4] See Joseph P. Kalt, The Economics and Politics of Oil Price Regulation (Cambridge, Mass.: MIT Press, 1981).

[5] George Horwich, testimony on the Emergency Preparedness Act of 1981 before the Subcommittee on Energy and Agricultural Taxation of the Senate Committee on Finance, 97th Cong., 1st Sess., December 8, 1981.

[6] See U.S. Department of Energy, Energy Information Administration, Monthlv Energy Review, July 1984, p. 29.

[7] The profit-maximizing level of output is a judgment call, and the following is the source of my judgment:

$n1 = (Qd/qi)n - (Qs/qi)e$

where ni is the elasticity of demand faced by Iraq, Kuwait, Saudi Arabia, and the UAE collectively; Qd is the total quantity demanded in the world market; qi is the quantity demanded from Iraq et al.; n is the elasticity of world

demand; Qs is the quantity supplied by countries other than Iraq et al.; and e is the elasticity of supply of countries other than Iraq et al.

ni is the unknown to be solved for. Qd = 60 mbd, qi = 12.3 mbd, n = -0.15, Qs = 47.7 mbd, and e = 0.1. To get n = -0.15, I weighted by consumption the elasticities of demand of various countries (United States, Canada, Europe, and Japan) as reported by Derriel Cato of DOE's Energy Information Administration. See David R. Henderson, "The IEA Oil-Sharing Plan: Who Shares with Whom?" Energy Journal 8, no. 4 (1987): 23-31.

ni then equals 1.12. Note that the elasticity of demand faced by Iraq et al. is above 1.0. Therefore, an increase in price would reduce revenues. A case can be made that Saddam would not increase the price, but to overstate the damage, I assumed a 4-mbd cut.

[8] Actually Cato reported that the United States and Europe had an elasticity of demand of -0.15, that Canada's and Japan's elasticities were -0.12, and that other countries' elasticities were -0.17. I weighted each country's elasticity by its consumption to get the world elasticity of demand of -0.15. See Henderson.

[9] Susan F. Rasky, "Senators Question Control of Gulf Aid," New York Times, September 12, 1990, p. A9.

[10] See Earl C. Ravenal, "Disengagement from Europe: The Framing of an Argument," in NATO at 40: Confronting a Changing World, ed. Ted Galen Carpenter (Lexington, Mass.: Lexington Books, 1990), p. 235.

[11] See, for example, Rick Atkinson, "Costs of Confrontation: Who Pays? How Much?" Washington Post, August 15, 1990, p. A12.

[12] See Arlon R. Tussing and Samuel A. Van Vactor, "Prospective on World Energy Markets: Real Costs Will Continue to Fall," OPEC Review, forthcoming.

[13] Ibid.