

The Oil Security Problem

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Today, three of every five barrels sold on the world petroleum market originate from insecure regions: the Persian Gulf, North Africa, Nigeria, Angola, Venezuela, Russia, and the Caspian states. Political, military, or terrorist events could disrupt oil markets and quickly double oil prices. If these events happen at a time when monetary authorities find it difficult to control inflationary expectations, a trend much more likely today than just a few months ago, the world could return to the 1970s and stagflation.

Reducing our vulnerability to such events is the main task for oil security policy. Curtailing imports from sources like our major oil trading partners (Canada and Mexico) is unlikely to benefit us. But reducing our imports is important only if we can reduce the market share of vulnerable supplies. Doing so would mean that disruptions will remove less oil from the market and thus cause severe price shocks.

Our vulnerability also depends upon how closely our infrastructure is tied to petroleum use. When disruptions cause oil prices to double, that price applies to any oil used in the U.S. economy, including domestic oil and ethanol supplies. Therefore, efforts to reduce oil demand may be more valuable than efforts to simply replace vulnerable imported supplies.

Pursuing energy security is relatively simple in conceptual terms. The nation is buying an insurance policy against future recessions caused by unanticipated oil price shocks. Today's insurance policy should cost no more than the value of avoiding these possible damages. Higher avoided damages could be due to either a greater probability of a disruption happening

Climate Change: Addressing Competitiveness Concerns

In March, Senior Fellow Richard Morgenstern testified before the U.S. House of Representatives Committee on Energy and Commerce. This article is based on his full testimony.

Due to the diversity of greenhouse gas (GHG) sources, efforts to address climate change will, of necessity, impact nations, industries, and individuals. In general, pursuing a cost-effective approach that minimizes the overall cost to society of achieving a particular emissions-reduction target will minimize the burden imposed on businesses and consumers.

The first step to addressing concerns about competitiveness should be paying close attention to considerations of cost and efficiency. Broad, market-based strategies—such as an emissions tax or a cap-and-trade program that effectively attach a price to GHG emissions—offer significant advantages. In order to limit hardships on selected industries, however, additional mechanisms to increase flexibility will be required. These could include recognizing offset credits from sectors or gases not included under the cap and from projects undertaken in other countries.

But even with a cost-effective strategy for reducing U.S. GHG emissions, some domestic producers will incur increased production costs and face increased challenges to their ability to remain globally competitive, particularly in trade-sensitive, energy-intensive sectors.

The question will likely be asked: why should U.S. firms be disadvantaged relative to overseas competitors to address a *global* prob-

lem? The difficulty, moreover, is not just political: if, in response to a mandatory policy, U.S. production simply shifts abroad to unregulated foreign firms, the resulting emissions "leakage" could wipe out some of the environmental benefits sought by taking domestic action.

As policymakers consider options to lessen these competitiveness impacts, an important caution is in order. As compelling as the argument for protecting vulnerable firms or industries might be, few provisions or program modifications designed to accomplish this can be implemented without some cost to the environment, as well as to the overall economy. Nor are trade-related actions costless: they might raise legality concerns under World Trade Organization rules or risk provoking countervailing actions by other nations.

Efforts to address competitiveness concerns in the context of a mandatory domestic climate policy typically involve one or more of the following options: weaker overall program targets; partial or full exemptions from the carbon policy; standards instead of market-based policies for some sectors; free allowance allocation under a cap-and-trade system; and trade-related policies, such as a border adjustment for energy- or carbon-intensive goods.

These options can also be mixed and matched to some extent. One option would be to start out with a generous allowance allocation for the most severely affected industries, which could then be phased out at a future time, either a certain date or once trade-related measures were in place or other key nations adopted comparable climate mitigation policies. In general, the more targeted policies will be difficult to police and many industries will have strong incentives to seek special protection by taking advantage of these various mechanisms without necessarily being at significant competitive risk. ■

► Richard Morgenstern's full testimony can be found at: www.rff.org/rff/Documents/CT-Morgenstern-08-03-05.pdf.

or to more serious economic impacts from such a disruption.

Stanford University's Energy Modeling Forum recently completed two studies that may help resolve some of the uncertainties related to damage estimates associated with oil insecurity.

In the first, a group of geopolitical and oil-market experts assembled to provide expert judgment on the risks of one or more disruptions occurring over the next 10 years. The experts considered four separate, oil-producing regions and identified specific disruption events and the conditions that could make them more or less likely. From there, they evaluated the probability that certain events could happen and the amount of oil removed from the market in each case.

In their view, another disruption is very likely, given today's conditions. Over the next 10 years, there is an 80 percent chance of at least one disruption of 2 million barrels per day (MMBD) or more that would last one month or longer.

Compared to previous periods, the risks today are greater for disruptions below 7 MMBD. Not only are there more insecure regions today, but fewer opportunities exist to offset any disruption with excess oil production capacity elsewhere. These offsets tend to be highly concentrated in Saudi Arabia and are unlikely to be available if oil is disrupted in that country.

In the second study, macroeconomic experts gathered to discuss the likely economic impacts of oil price shocks. An important distinction concerns the nature of an oil price increase. During the 1970s and early 1990s, oil supply disruptions caused prices to rise suddenly and sharply. These price shocks were fundamentally different from recent price increases, which have been rising more gradually than during the 1970s. Price shocks are likely to create great uncertainty, forcing firms and households to delay investments, producing spillover effects throughout the economy. Gradual price elevation, on the other hand, may anger the driver who fills his gasoline tank, but it is unlikely to delay investment and lead to a recession.

The other unknown is how economic policymakers will respond to disruptions. Over the last

few years, inflationary fears around the world have been very low, which has allowed monetary authorities to ease the money supply to offset lost economic output without creating additional inflationary pressures. In recent months, however, inflationary fears have grown and may become more intense yet. These developments would make it much more difficult for governments to intervene and offset lost output without exacerbating future inflation.

If inflationary fears tie Mr. Bernanke's hands, does the nation have a fallback position? Yes, although it seems unlikely that the political process will adopt these policies. First, larger public oil stockpiles would have limited value without a more explicit "trigger" mechanism for releasing oil during emergencies. Second, domestic ethanol or Alaskan oil supplies

could replace more vulnerable supplies, but would do nothing for our infrastructure's oil dependence. Third, fuel efficiency may be more valuable because it does both, reducing vulnerable supplies as well as our economy's reliance upon oil. And finally, automobile insurance rates could discourage excessive driving by being based partly on the miles driven.

More than a half century ago, the very possibility of oil vulnerability shocked the western world with the closure of the Suez Canal. Despite other major disruptions since that explosive event, there has been little evidence of "learning by doing" in current oil security policy. ■

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