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OPEC'S THREAT TO THE WEST

by Robert S. Pindyck

What kinds of changes should be expected in the prices and availability of world energy supplies during the next 15 years? Will oil prices increase slowly over time, or is another large and sudden price hike likely to be levied by the Organization of Petroleum Exporting Countries (OPEC)? Will energy supplies be available even at higher prices, or should we expect worldwide shortages? And how will these changes in energy prices and availability affect the economies of the industrialized countries?

According to recent projections by the Central Intelligence Agency, a crisis is likely to occur in the early 1980s as world energy demand exceeds supply, resulting in shortages of energy, rapidly rising prices, and economic contraction in all of the industrialized countries. By the early 1990s, the agency believes, the oil shortage will become worse as countries scramble for the scant supply available. This view has had an important role in forming the rationale for the Carter administration's energy program. However, it is a highly unrealistic view, because it ignores the impact of past and future changes in energy prices on energy supply and demand. In fact, this kind of crisis is very unlikely to occur, but another kind of crisis—an oil embargo or OPEC production cutback—could occur quite easily. That prospect needs more attention in the design of U.S. energy policy.

Available data can lead to answers to the questions listed above different from those offered by the CIA. Since the evolution of world energy markets hinges on the OPEC cartel, one may begin by describing OPEC's most likely pricing and production behavior. This will provide the basis for discussing the kinds of energy crises that should or should not be of concern, and the implications for domestic and international energy policy. Finally, it is appropriate to discuss the likely impact of rising energy costs on economic growth, inflation, and unemployment in the industrialized countries.

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OPEC *and the Price of Oil*

With the power to set the world price of oil, OPEC is a driving force behind world energy markets, and its decisions have profound implications for the economies of all the industrialized countries. It is therefore important to understand the ways in which OPEC is likely to change the price of oil in the future.

OPEC's pricing behavior is surprisingly predictable, since the cartel is most likely to take only those actions that are in its best economic interest. Considerations other than economic ones may, of course, influence OPEC pricing decisions, but economic interests have dominated in the past and are likely to dominate in the future, and they provide the best basis for predicting oil prices. One must therefore put himself in OPEC's position and ask what is the best price to charge for oil.

What do we mean by the best price? It is often interpreted to mean the price that maximizes profits—or equivalently for OPEC, where production costs are insignificant, the price that maximizes revenue. But a price that maximizes today's revenues, ignoring future revenues, is clearly not "best." As several OPEC members have already made quite clear, the depletion of existing reserves and its impact on future revenues must also be considered in determining today's price. It makes most sense, then, to adjust the price so that it always maximizes the flow over time of all current and discounted future revenues. Future revenues must be discounted to reflect income lost by not investing current revenues. Just as the stockholders of a company hope that its management will act

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