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Speculation: A Cause or Symptom? An Important Question for Designing a Policy Remedy

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The price of oil recently reached record highs, carrying gasoline price with it and prompting policymakers to debate proposals to bring relief to their constituents. Meanwhile, Americans are responding by favoring both conservation and higher fuel efficiency. These demand-side responses are to be expected and work to lower prices. But, there are many factors that have contributed to high oil prices, and there is room for policy to have a real impact, especially in the longer term. To do so, energy policy must be well-designed, not a knee-jerk reaction to the latest outcry, and work in a time frame policymakers do not typically consider — beyond the next four years.

Recently, much attention has been given to the role of speculation. In particular, some have claimed that speculative trading is what caused oil prices to run up so dramatically. By definition, speculators have no interest in physical delivery of oil; rather, they bet on the direction of price and hope to gain on the "paper" positions they take. In a market with a storable commodity, such as oil, the influence of speculation should be limited to the extent that inventories build when price rises. However, if neither supply nor demand responds in the short term to a rapid increase in price, then inventories will not build and speculative trading can drive prices higher.

Importantly, the influence of speculation on price formation is diminished in a market with ample productive capacity precisely because the availability of future supply is not in question. Thus, we must address the fundamentals contributing to the tight supply-demand balance. It should be noted that this does not address the establishment of market rules that limit traders' abilities to take large positions in unregulated exchanges. The issue of speculation in that regard still must be addressed and poses a challenging problem. Studies have shown that trading provides liquidity that is valuable to mitigating price risk for both producers and consumers.[1] So, ill-designed constraints on trading activity could create unintended consequences by reducing market liquidity, which, in turn, could result in less investment activity yielding even higher prices longer term.

There has also been much attention given to the role of a weak U.S. dollar. Oil is traded in dollar denominations, so it stands to reason that more dollars will be required to purchase a

[1] See, for example, J. Fleming and B. Ostdiek, "The Impact of Derivatives on the Crude Oil Market" (2004), available at http://www.rice.edu/energy/publications/docs/Flemming_ImpactEnergyDerivativesCrudeOilMarket.pdf

barrel of oil when the dollar weakens — after all, the barrel has not lost any of its intrinsic value. As the dollar devalues, oil — like any other commodity — becomes a store of value for traders and can be used to earn positive, short-term, dollar-denominated returns. Specifically, if the value of the dollar is falling, one can buy oil today then sell it tomorrow to earn the dollar price increase that occurred in the interim. Notably, any improvement in the fundamental supply-demand balance that lowers oil price will improve the U.S. balance of trade, which would then tend to improve the value of the dollar and reinforce a lower oil price.

While the role of speculators and the declining value of the dollar can impact oil price, there are fundamental factors underlying the degree to which they have an impact. To address the role of speculation and a weak dollar on oil price formation, therefore, policy should be designed to address the deeper, long-term concerns about rising demand and inadequate supply.

The supply-demand tightness in the current oil market has been influenced heavily by the rapid global demand growth, and strong growth projections exacerbate the problem by leading to speculation about the adequacy of future supply. In fact, the price of oil moved upward earlier this year on the heels of the International Energy Agency (IEA) announcement that demand growth in China and India will continue to be very strong well into the next two decades, despite high prices. While the IEA forecast can be disputed on a number of fronts, as an authoritative source the IEA contributes to expectations about the future global supply-demand balance. Actions directed at curbing demand growth can have a large impact on the global oil balance. A strong commitment to investments in energy efficiency and alternative energy technologies would greatly help, but this is still lacking at the scale necessary. Efficiency gains, particularly in major consuming countries, have been minimal at best over the last 15 to 20 years. Efficiency acts as a virtual source of supply by facilitating greater energy service without additional energy use. Thus, it should be consistently encouraged as an investment in a sustainable energy future.

Expectations about future oil supply also play a role. The Organization of Petroleum Exporting Countries (OPEC) has not substantially increased output in the face of rising global demand, leading some analysts to pontificate about their ability to do so. This has even given renewed vigor to the argument that global production is nearing its peak. Questions about future production are often raised in light of the fact that an increasing proportion of the world's remaining conventional oil is under the direct control of national oil companies. Coupled with

the fact that the access of international oil majors to those resources is limited, future production is left in the control of national oil companies, many of which are generally less well-equipped to increase crude oil output.[2]

Doubts about the adequacy of future supply have been exacerbated by the apparent lack of investment in exploration and development by the major international oil companies during the last several years.[3] One common outcry from these companies is that they do not have access to the types of large projects that they have a comparative advantage in developing. This, of course, includes access to resources in areas held by national oil companies, but it also includes domestic acreage, such as the Alaskan National Wildlife Refuge (ANWR) and the Outer Continental Shelf (OCS), the opening of which have both been hotly debated.

So, is speculation a cause or symptom of high prices? It is both. Speculation cannot act to raise price absent tight supply-demand fundamentals, but, when fundamentals are tight, speculation can act to raise prices dramatically. Thus, certain policy measures aimed at speculative trading may be warranted, but if we are to address the root cause of high prices long term, we must reduce uncertainty about the future supply-demand balance by acting on a number of fronts. This includes taking steps to expand production opportunities, promoting conservation and greater efficiency, and moving to reduce oil demand in the longer term by supplementing the primary energy mix with increased use of alternatives. Each of these measures would contribute to a much more robust supply-demand energy balance. Moreover, by tackling the problem in a variety of ways, the probability of achieving the stated goal is improved, and likely at a lower cost than if only one approach is taken.

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[2] See S.L. Eller, P.R. Hartley and K.B. Medlock III, "Empirical Evidence on the Operational Efficiency of National Oil Companies" (2007). Working paper at http://www.rice.edu/energy/publications/nocs.html.
[3] See A. Jaffe and R. Soligo, "The International Oil Companies" (2007). Working paper at http://www.rice.edu/energy/publications/nocs.html.