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The Geopolitical Potential of the U.S. Energy Boom

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Booming production of U.S. oil and gas is delivering economic, security, and climate change benefits. The geopolitical dimension – notably the prospect of energy exports – has attracted particular attention in recent weeks as the United States has sought new leverage against Russia. The United States should allow energy exports but be modest about what they can accomplish. In particular, while the prospect of U.S. energy exports could usefully reduce Russian energy export revenues, U.S. exports will not displace Russia from its dominant position in the European market; claiming otherwise reduces U.S. credibility. It is also important for policymakers to anticipate and mitigate downsides from the energy boom and from energy exports.

Production Forecasts

Debate continues over how much tight oil and shale gas the United States can ultimately produce. Skeptics point to the fact that individual wells initially produce large amounts of oil and gas before production falls off rapidly. But modeling of U.S. output under a wide range of assumptions confirms that, so long as oil prices do not plunge, U.S. oil and gas production should remain well above the levels seen in the previous decade. There is considerably less certainty about precisely how high U.S. oil and gas output will rise, with uncertainty in geology, technology, demand, and regulation remaining, but the upside potential is high. I note this to emphasize that my warnings about overstating the geopolitical benefits of the energy boom do *not* stem from pessimism about future production. Rather, they are grounded in concerns about the connections that people have claimed between rising oil and gas production and consequences overseas.

Natural Gas Exports

Geopolitical Consequences

Many observers have argued that allowing natural gas exports could be a large weapon against Russia. These claims contain a kernel of truth but have consistently been overstated. Europeans' ability to quickly shift from Russian to U.S. natural gas in a future crisis would be severely limited by infrastructure constraints even if the United States expanded its LNG export infrastructure: unless European companies build a large number of LNG terminals and pipelines and then idle them – something that profit-seeking companies rarely do on purpose – there will be limited capacity to absord a sudden influx of U.S. LNG in a crisis. Moreover, the United States is unlikely to seriously erode Russia's share of the European market: Russian gas is substantially cheaper than delivered U.S. LNG, so Russia can maintain its market share by underpricing the U.S. supplies. (Private U.S. producers will not sell gas at a loss to hurt Russia.) This does, however, point to the one major way in which U.S. LNG can hurt Russia: by forcing Russian selleres to cut their prices, it would put pressure on Russian revenues, undermining the Russian state.

The strongest argument for allowing exports has nothing to do with weakening any particular country. Instead, is that *blocking* exports would undermine U.S. efforts to promote the open global trading system that generally benefits the United States. In particular, the United States has effectively opposed Chinese restrictions on raw materials exports at the World Trade Organization (WTO). Imposing major restrictions on U.S. natural gas exports would undermine U.S. leverage against similar practices by China and others.

Beyond Europe, U.S. LNG exports can also yield geopolitical dividends in Asia, helping break down the rigid and politicized natural gas trading system that prevails there. This will only happen if the bulk of U.S. LNG exports come with no restrictions on their ultimate destinations, as has been the trend thus far.

Economic and Environmental Issues

Much of the debate over LNG exports, of course, has centered around economic and environmental impacts. My estimates indicate that the long-run economic benefits of allowing exports exceed the costs by as much as several billion dollars annually but not more – a small number in a sixteen trillion dollar economy. Because natural gas exports would boost demand for U.S. gas, they would raise the price of natural gas sold in the United States. Most robust estimates of that impact range from zero to a little more than a dollar for thousand cubic feet of gas. (The average U.S. residential consumer buys about seventy thousand cubic feet of natural gas a year.) This price increase would induce greater drilling for gas while deterring some energy-intensive manufacturing. Analysts typically reject predictions of substantially larger export-driven price increases because higher priced U.S. gas would not be attractive in foreign markets.

While recognizing the benefts, it is essential to keep the economic costs in mind. Chief among these is the burden on lower-income consumers, who might pay roughly fifty dollars more a year for electricity and fuel, a non-trivial increase. The prospect of exports makes it all the more important to maintain the Low Income Home Energy Assistance Program (LIHEAP), which shields vulnerable consumers from higher natural gas prices. There have also been concerns that energy-intensive manufacturers would be significantly damaged

by exports. This would be true for a limited number – particularly in fertilizers – but for others, the impact is either slight of highly variable among regions. For example, some steelmakers would suffer marginally from higher natural gas prices; other might worry about competition for engineering and project management services; and still others would benefit from increased steel demand originating in the natural gas industry.

Exports would also increase local environmental risks as a result of more drilling. The prospect of expanded exports makes it all the more important that the United States put in place strong regulations to ensure that drilling – whether for domestic consumption or export – is done safely. Much of the necessary framework should be put in place by state and local governments, but some minimum federal standards (including for chemicals disclosure and air emissions) would be wise, helping protect the boom from a backlash.

Policy Levers

What tools do the administration and Congress have if they wish to increase U.S. LNG exports? Recent attention has focused on the possibility of accelerating (or eliminating) the Department of Energy (DOE) approval process for LNG exports to countries with which the United States does not have a special free trade agreement ("non-FTA countries"). Critics of the current process point out that only seven applications have been approved and that another twenty-five are pending. No serious analysts, however, believe that most of the projects waiting in the queue would be built *even if they were approved*. Most of these projects have not been able to find buyers or financiers, and those that have found customers generally plan to ship their gas to Asia. The main barrier to U.S. exports to Europe is not the DOE process – it is the lack of commercial demand for relatively high-cost U.S. gas. At the same time, were the United States to remove the DOE approval process, it would lose an important bargaining chip in trade talks with Japan and Europe.

If the United States wishes to speed up export approvals, it should focus on the Federal Energy Regulatory Commission (FERC) approval process, which is more complex and slower than DOE's. Accelerating the FERC process while maintaining its integrity would require a modest increase in the FERC budget.

The United States should also be careful to avoid export policies that would backfire. There has been widespread discussion about providing blanket approval for exports to NATO allies. This would be unwise: since some European countries are not NATO members, no European countries – which are rightly required to allow the free flow of natural gas within Europe – would be able to receive LNG whose ultimate destination was restricted to NATO. There have also been calls to provide blanket approval for exports to Europe, Japan, and perhaps India. This would also be dangerous: it would, in practice, be tantamount to an "anyone but China" export policy, which would undermine decades of efforts to persuade China to rely on markets rather than policital alliances to ensure the security of its energy supplies.

Oil Exports

Allowing oil exports would be less geopolitically consequential than allowing natural gas exports and would likely have less impact on Russia. As in the case of LNG exports, the most powerful reason to allow oil exports is that *blocking* them would undermine the United States's ability to promote open markets more broadly. Beyond that, allowing oil exports would do little to change the basic structure of oil markets, which are already far more flexible than gas markets. In particular, Russia has little ability to cut off European oil

supplies today, since Europe could turn to other supplies on the international market to make up shortfalls. There is no fundamental geopolitical problem with oil markets that allowing U.S. oil exports would fix.

Allowing oil exports would likely deliver positive but limited economic benefits to the United States. Exports would help oil producers while hurting refiners; they would probably reduce the price of gasoline very slightly as well. (There are no robust estimates of these impacts available yet.) There have been claims that allowing exports could turbocharge U.S. oil production by raising the price received by U.S. drillers by as much as ten dollars a barrel or more. These claims are typically grounded in the observation that U.S. drillers currently sell their oil at a steep discount to international prices, and that allowing exports would erase much of that discount. But even without allowing exports, U.S. and international prices will converge considerably, as U.S. refiners and pipeline operators make investments designed to exploit abundant U.S. light oil. The extra boost provided by exports would thus be much smaller than many expect.

The main international consequence of allowing oil exports (including for Russia) would be to slightly reduce the world price of oil (as a result of slightly higher U.S. production), damaging oil exporters while helping importers. It is difficult, however, to envision a scenario in which allowing U.S. oil exports reduces world oil prices by more than a few dollars a barrel, and it is easy to envision scenarios in which the impact is considerably smaller. The geopolitical consequences of allowing exports would similarly be limited.

Other Geopolitical Benefits and Risks from the Oil and Gas Boom

Imagine for a moment that the shale gas boom had not happened. The United States would today be a major importer of liquefied natural gas (LNG). The U.S. government would be approaching the Russia-Ukraine crisis differently Any interruption of Russian natural gas flows to Europe would send Europeans scrambling for supplies on the international market, driving up costs for everyone, including U.S. consumers. With that potential in mind, policymakers might be more hesitant to confront Russia, distorting U.S. foreign policy. This greater insulation from events abroad is likely to be the largest geopolitical dividend of the gas boom.

The main geopolitical consequences from the U.S. oil boom will also result from dynamics unrelated to exports. Rising U.S. oil production will restrain oil price increases. How much so is highly uncertain, and depends on oil production decisions by Saudi Arabia and, to a lesser extent, other major oil producers; the long-run impact of higher U.S. oil production could be as little as a few dollars a barrel (perhaps the most likely case) and as much as twenty dollars a barrel or more. At a minimum, rising U.S. oil production reduces the risk of substantially higher oil prices. Lower oil prices are good for U.S. economic growth, reduce U.S. exposure to oil market disruptions overseas and thus increase U.S. freedom of action in the world, harm oil exporters (some but not all of which are hostile or unfriendly to the United States), and help oil importers.

Changing trade patterns resulting from lower U.S. oil imports will also alter countries' approaches to each other. In principle, countries should not care much about where they buy their oil from, since oil is traded on a flexible global market. In practice, leaders do care, which means that shifting trade patterns resulting from the U.S. oil boom will have real consequences for international relations. For example, with Middle Eastern producers sending less of their oil to the United States and more to China, they are likely to become more concerned about maintaining good relations with Beijing, however economically unjustified that may be.

At least as important are the geopolitical risks that can arise from U.S. miscalculations. U.S. vulnerability to oil market disruptions depends less on how much oil it *imports* and much more on how much oil it *consumes*. If U.S. policymakers incorrectly come to believe that the country will be far more "energy independent" as a result of rising oil production, and neglect efforts to promote energy efficiency and alternative fuels, the U.S. economy would become more vulnerable to volatile oil prices and U.S. national security would suffer. Similarly, if U.S. policymakers come to believe that the country no longer needs to assure the stable flow of oil from the Middle East – again an incorrect conclusion – the resulting shifts in military posture could leave oil markets more turbulent and the United States less secure.

There have also been claims that the United States will be more free to impose sanctions on oil producing countries as a result of its own boom. These claims overread the lesson of Iran sanctions, which were indeed enabled by the U.S. oil boom but exploited an unusual set of circumstances that is unlikely to be repeated. If U.S. policymakers become overly confident in the potential of sanctions, or excessively cavalier in wielding them, the United States could again end up less secure as a result.

Other Energy Sources and Goals

It is also essential that the U.S. oil and gas boom not blind policymakers to opportunities in other energy sources and in efficiency. The United States has seen record declines in oil consumption in the last nine years, driven by a mix of high oil prices, technological progress, and a weak economy. With a mix of stronger fuel economy standards and financial support for innovation in alternative fuels (particularly electricity and natural gas), the country could reduce its oil consumption further, reaping additional economic, security, and environmental benefits. In the long run, it is lower oil consumption and diversification away from oil that can ultimately bring the United States (as well as Europe) closest to genuine energy independence.

It would also be unwise to make U.S. energy policy without incorporating serious efforts on climate change. This is particularly true as the United States competes for geopolitical advantage. Countries at high risk from climate change are judging the United States based in part on how effectively it reduces its own emissions. For example, states in Southeast Asia are vulnerable to extreme weather, and are also at the center of intense competition between the United States and China for allegiance. Improving U.S. performance on climate change would be an asset in that fight. Critics of the oil and gas boom have been wrong to claim that it is incompatible with a serious climate strategy, but they are right to insist that the United States do more to reduce its emissions. Rising gas production and falling costs for renewables provide an opportunity to cut U.S. emissions, but government action – ideally a price on carbon, but if not, then regulatory steps to encourage shifting from coal to gas and other low-carbon fuels – will be essential.

Conclusion

The U.S. oil and gas boom provides the United States an important opportunity to strengthen its economy and its national security. This opportunity will be undermined, though, if policymakers overestimate what the boom can do; if they neglect to confront the economic and environmental downsides associated with oil and gas exports; and if they fail to pursue opportunities on other energy fronts while they exploit the oil and gas boom. A "most of the above" strategy that seizes opportunities on multiple fronts while being realistic about what can be accomplished is the best route to taking advantage of the new U.S. energy opportunity.