Insight

How Prices Spur Greater Energy Production

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Summary

- The United States is now the biggest producer of oil in the world. This is in part because increased oil prices have spurred increased domestic production.
- Oil prices today are 40 percent higher than the 2017 forecast, but are 30 percent lower than the 2014 forecast—reinforcing the fact that while price spikes in the near term are painful, in the long term they incentivize production and more efficient consumption.
- Even though prices are the most effective tool for incentivizing productivity, politicians are often resistant to loosening policies to allow better price formation in energy—such as in electricity markets or natural gas exports.

Introduction

The United States is now the world's largest crude oil producer, the U.S. Energy Information Administration (EIA) reports, exceeding Russia's production for the first time in nearly 20 years. This production increase corresponds with higher than expected oil prices, and not coincidentally. Policymakers should draw an important lesson from this production surge: Prices spur production, and the best way to ensure cheap and reliable energy is to avoid regulating prices.

History of Recent Price Swings

The recent production increase in the United States traces its origins back to the energy revolution, which the American Action Forum (AAF) estimates has saved consumers approximately $431 billion annually. The increased crude oil production is fundamentally because of increased shale oil production, which uses relatively new technology to access oil deposits that previously were inaccessible. Shale oil is the primary reason for why U.S. production has grown so much over the last decade or so; it now makes up over half of domestic total oil production.

Yet shale oil production is somewhat riskier and more expensive than traditional oil drilling, and when oil prices are low U.S. production drops significantly. Thus, the other factor that enabled the recent increase was surging oil prices.

The rapid increase in domestic U.S. production between 2010 and 2016 caused oil prices globally to slide by over 70 percent from peak to valley. That decline in prices reduced the profitability of oil production, reducing the incentives for increased domestic production and pushing less-efficient producers out of the market.

That price slide also harmed Saudi Arabia and other foreign oil producers substantially, who agreed in late 2016 to cap their production to force prices to rise. The agreement between the Organization of Petroleum Exporting Countries (OPEC) and Russia to cap production combined with Venezuela's political difficulties to cause nearly 1 million barrels per day of production to leave the market. Other threats to oil production, such as conflict in Libya's oil crescent, further threatened production. The constrained supply caused prices to increase to around $70 per barrel—approximately 40 percent above the EIA's expectation of average oil prices for 2018.

The increased oil prices, though, incentivized more production from industry participants that could. Government-controlled oil companies—such as those in Saudi Arabia, Venezuela, and Russia—often lag behind private-sector industry in investing in oil exploration and new extraction technologies, a lag that manifests in OPEC's declining swing production. Yet U.S. producers with the ability to extract shale oil could start pumping oil quickly. The result has been domestic oil production overtaking that from Russian and Saudi Arabia.

The Lesson

This production increase could be viewed as a win for the National Labs(which invented

much of the technology underlying shale oil extraction), for a privatized energy industry, and for reduced regulation such as eliminating the ban on exporting oil. But there is a simpler and even more important lesson for policymakers: Don't mess with prices.

Politicians are hypersensitive to prices, as they receive an inordinate share of the blame when prices rise. President Nixon, in 1971, implemented price and wage controls on all aspects of the economy. Those price controls had ruinous effects, but were lifted for everything *except* energy, which retained price controls until President Reagan ended them in 1981.

But the truth is that prices are extremely important to achieving policy goals efficiently. A price increase is a prize to producers, incentivizing existing producers to increase their efficiency of output, and encouraging competitors to enter the market—both of which are events that put *downward* pressure on prices by increasing production. Policies which create biases against the incentives created by prices, either through regulations or subsidies, tend to be very costly for Americans, as either production or wealth must be sacrificed to satisfy the government mandate.

To see how normal price formation improves efficiency and outcomes in energy markets, simply look at the Texas heatwave in the summer of 2018. Texas is the only region in the United States that exclusively uses short-term price formation in energy markets—in other words, electricity producers only get paid when they are making electricity, instead of being paid to remain on standby in case a need should arise. The high electricity demand was expected to push Texas' grid over the edge. The competitive nature of the Texas electricity markets caused less-efficient producers to flee the market, shrinking the total available capacity in the region. But high electricity prices during heat waves create strong incentives for suppliers to remain in the market, and Texas experienced no blackouts despite its lack of regulation. By contrast, most other states regulate electricity pricing and market participation heavily.

Plenty of areas in the U.S. energy market could benefit from a renewed appreciation for the power of prices. Domestic electricity production is one. And natural gas exports are still tightly regulated and require approval from the State Department. After natural gas production in the United States surged, the Brookings Institution noted that the wait time to receive approval from the State Department for exports had ballooned from 8 weeks to 4 years. Lifting those regulations has been difficult, due to fears about price increases that would result from an expanding pool of potential buyers. While prices would increase, they would also increase the incentives for domestic production to rise, bringing more economic activity—which AAF estimates will be $1.63 trillion of trade value through 2040. Even though changing the policy would be a net benefit to Americans, any policy that could

increase prices domestically is politically unpopular.

Conclusion

As oil prices continue to rise—and domestic production continues to rise alongside it—note that the lack of government interference has helped to create more efficient outcomes for Americans. Despite oil prices being higher now than expected last year, they are 30 percent *lower* than what was expected five years ago, thanks to U.S. oil production increasing beyond expectations. When U.S. policymakers want to achieve objectives that rely on markets, they will have the best outcomes when the market values and rewards improved productivity and efficiency of consumption through accurate pricing.