

Decomposing Crude Price Differentials: Domestic Shipping Constraints or the Crude Oil Export Ban?

Mark Agerton^{*} and *Gregory B. Upton Jr.*[†]

Executive summary

In 1975, United States President Gerald Ford signed the Energy Policy and Conservation Act (EPCA), which prohibited the export of domestically produced crude oil and created the Strategic Petroleum Reserve. Decades later, in the late 2000s and after many years of declining U.S. crude oil production, the combination of horizontal drilling and hydraulic fracturing techniques enabled companies to produce oil and gas from geological formations that had been, heretofore, uneconomic. This technological innovation sparked a production renaissance.

Concurrent with this new source of production, over the past decade the U.S. domestic crude benchmark, WTI, diverged considerably from its foreign counterpart, Brent. Some studies pointed to the crude oil export ban in conjunction with the new supply of crude as the culprit for this divergence. In this research, we point out that pipeline capacity was also scarce during this time and also could have contributed to the price differential. Specifically, we estimate the extent to which transportation constraints can explain this price differentials. We find that scarce pipeline capacity explains half to three quarters of the deviation of the mid-continent crude oil prices from their long-run relationship with Brent crude. We are unable to find evidence that refining constraints contributed significantly to this differential. This implies that the short-run deleterious effects of the export ban may have been exaggerated and that a price differential likely would have ensued during the shale boom, regardless of whether the export ban were in place or not.

Keywords crude oil prices; crude oil export ban; shale oil; crude oil pipelines; crude-by-rail; congestion pricing; oil refining

^{*} Center for Energy Studies. James A. Baker III Institute for Public Policy. Rice University. magerton@rice.edu

[†] Center for Energy Studies. Louisiana State University. gupton3@lsu.edu