Author(s):

Szilárd Benk;

Max Gillman

Institute of Economics

CORVINUS UNIVERSITY of BUDAPEST

Identifying money and inflation expectation shocks to real oil prices

Energy Economics

Abstract:

The paper extends the well-known three-variable SVAR model that explains real oil prices based on supply and demand shocks to the oil market. We identify significant monetary sources of shocks to real oil prices through a money supply shock and an inflation expectations shock. Results indicate robust significance of these two monetary shocks under a variety of time periods, using an alternate aggregate demand variable, and adding a fourth fundamental variable based on oil inventories. We also use alternative money aggregates for the money supply. Given their significance, we derive a historical variance decomposition of real oil price changes by each shock's contribution. We find a significant displacement of oil supply and demand factors by monetary factors that we match up to historical US monetary policy regimes. During major oil price episodes when monetary shocks dominate, the US money supply and inflation expectation shocks largely explain oil price increases above fundamentals. We interpret this in terms of the US monetary policy during crisis periods and find a common component of that policy linked to oil price episodes. Results imply that US monetary policy led to unintended consequences in energy markets. The results could facilitate improvements in international energy policy, US monetary policy, and global economic stability.

Journal ranking:

SJR 2022: D1, AIp 2022: 93

Full text