Pass-through of oil supply shocks to domestic gasoline prices: evidence from daily data[1]

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Abstract

Oil prices react to various types of shocks, and their impacts could reach our lives quickly. For example, on one day, we might hear on the radio that OPEC has decided to cut their oil production for the next year, and, only a few days later, find out that our local gasoline station has just raised the price. This paper examines daily data on gasoline prices, produced by a price comparison site in Japan, to estimate how they respond to a shock that hit the world oil market. In doing so, we take seriously the possibility that an increase in oil prices might cause different reactions depending on the source of the change. This paper focuses on one particular type of shock, namely changes in expectations about future supplies of crude oil. Identification is achieved via estimating a version of the Structural VAR with External Instruments (SVAR-IV or proxy-VAR) coupled with High Frequency Identification (HFI). The result confirms that pass-through is indeed very fast: about 70 percent of the entire adjustment process is completed within just 18 business days.

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