Oil Price Uncertainty and Inflation Dynamics

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This study investigates how oil price shocks affect U.S. inflation. Previous studies employing conventional structural vector autoregressive (VAR) analyses assert that oil price shocks have little effect on U.S. inflation. This study performs Engle and Ng tests to identify oil price uncertainty, defined as conditional variance in forecast errors of oil price changes, and examine whether oil price shocks have asymmetric effects on inflation allowing generalized autoregressive conditional heteroskedasticity (GARCH). Employing GARCH-in-mean VAR, I demonstrate that inflation responds substantially to positive oil price shocks, while it does weakly to negative shocks. This finding implies that oil price shocks affect inflation asymmetrically. I also show that oil price uncertainty may amplify the inflationary effects of positive oil price shocks. Thus, oil price uncertainty may be a determinant for the asymmetric effects of oil price shocks on inflation.