

‘A New Approach to Identifying Noise Shocks’

Eric Eisentat (with Benati, Chan and Koop)

ABSTRACT

The idea that news about future productivity can play an important role in business cycle fluctuations infuses much current macroeconomic research. But what if news is noisy, so that agents cannot quickly disentangle genuine news from a noisy signal? This paper addresses this question. A logical implication of agents' inability to distinguish news and noise shocks on impact is that the immediate response of the economy to the two shocks will be the same. We provide illustrations of this property within a present-value model for dividends and stock prices and a New Keynesian model. We then exploit this restriction, together with the fact that agents learn to distinguish news from noise over time, to identify news, noise and surprise shocks in a structural VARMA model. In an empirical application, evidence suggests that noise shocks play a minor role in macroeconomic fluctuations, explaining negligible fractions of the forecast error variance of the main macroeconomic variables.