

Chapter 3 : “ROBUST IMPULSE RESPONSES USING EXTERNAL INSTRUMENTS: THE ROLE OF INFORMATION”

Abstract

The external-instrument approach is widely used in macroeconometrics for the identification of structural shocks. Depending on econometricians' information set, it may lead to biased responses. We propose using this identification strategy in a structural Dynamic Factor Model (DFM), in order to avoid the problem. Through a simulation analysis involving fiscal foresight, we show that the Proxy DFM is always able to retrieve the true impulse response functions. Instead, the standard Proxy SVAR systematically fails to do so when the model is either misspecified, does not include all relevant information, or the measurement error is present. We apply our methodology to study the transmission of monetary policy in the United States, comparing the results obtained using the most commonly employed proxies in the literature. We find that (i) a tightening shock is unequivocally contractionary, with heightened uncertainty and deterioration in domestic demand, labour, credit, housing, exchange, and financial markets, (ii) Proxy DFM solves output and price puzzles, while VAR fails (iii) monetary policy shocks are important in explaining economic fluctuations and (iv) results are robust to the choice of the instrument.