IT Spillovers in TFP

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Topics of today's discussion

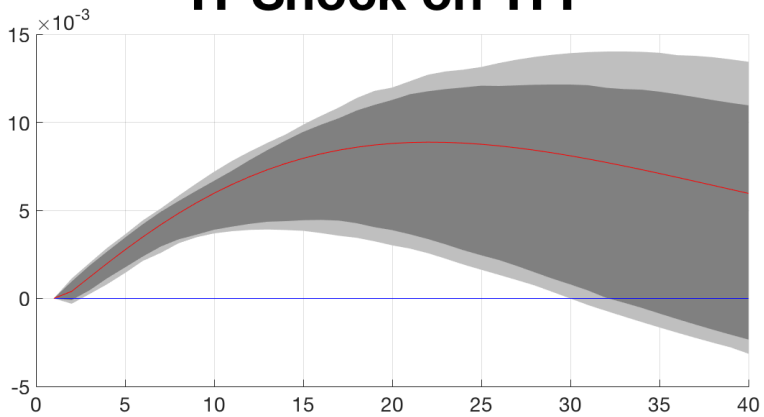
1. L'Huillier's structure-related comment: disentangling news shocks is just a robustness check
2. $\hookrightarrow$ taking up on that, a "just IT" identification in the VAR
3. the structural model: implementing a noise shock

2) "Just IT" identification

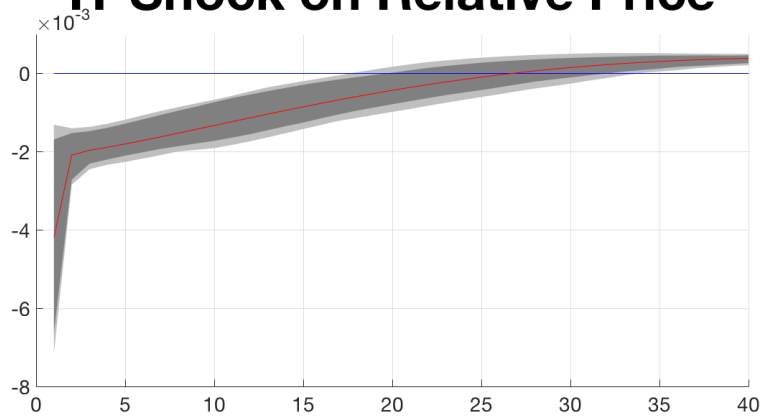
A rotation of shocks that maximizes the impact effect on IT investment s.t. a 0 impact response on TFP.

VAR Responses

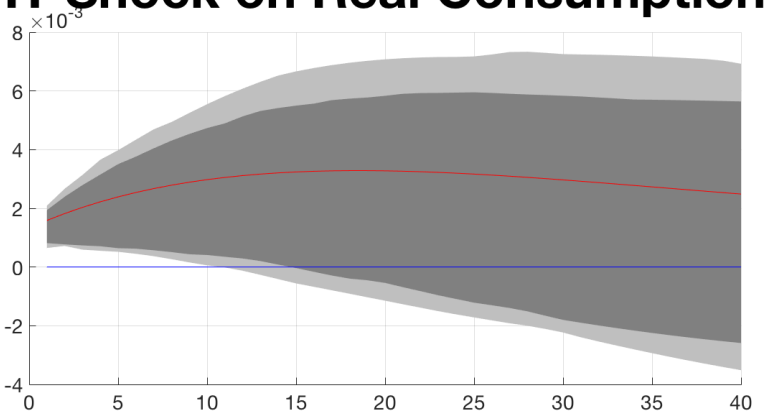
IT Shock on TFP



IT Shock on Relative Price

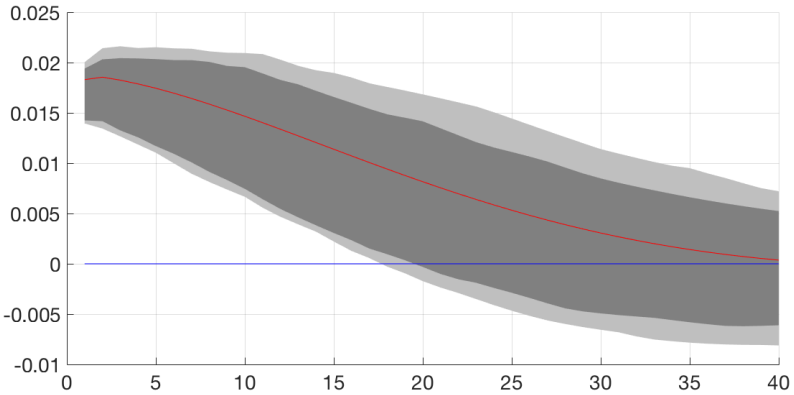


IT Shock on Real Consumption

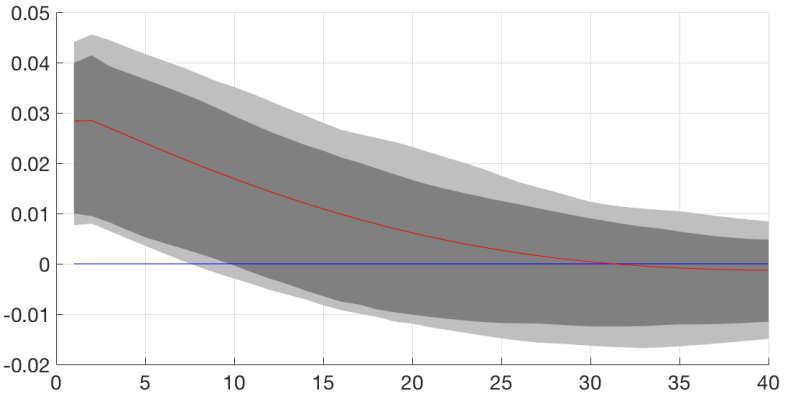


More VAR responses

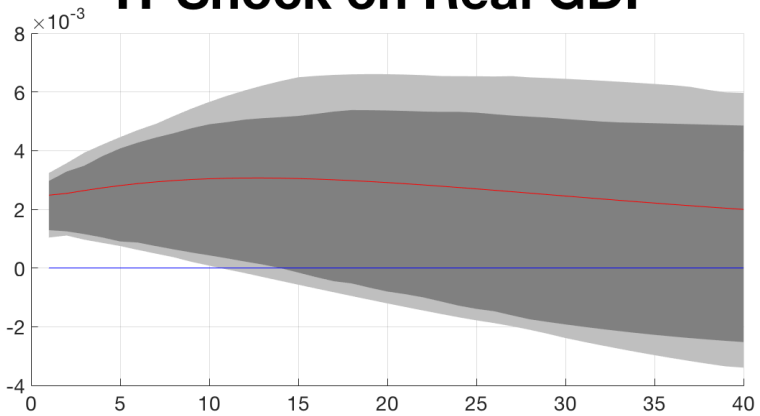
IT Shock on Real IT Investment



IT Shock on Real SP



IT Shock on Real GDP



$$y_{c,t} = N_t \quad \Gamma_{c,t} \quad k_{i,t}^{\gamma} \quad h_{1,t}^{1-a-b} k_{c,1,t}^{a} k_{i,1,t}^{b} \tag{1}$$

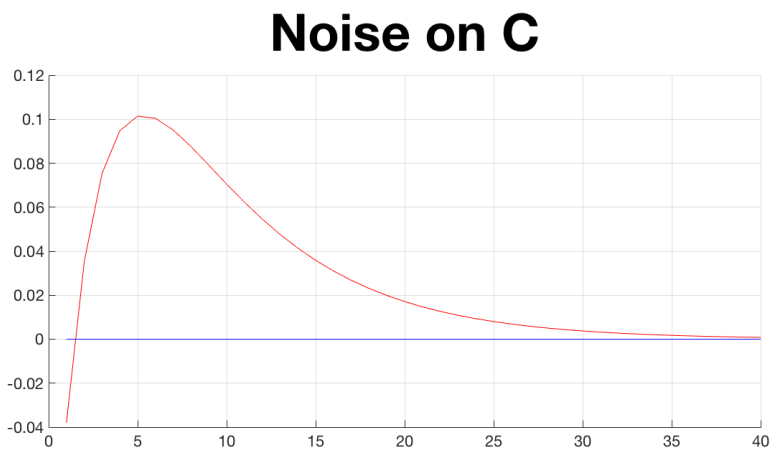
$$y_{i,t} = N_t \quad \Gamma_{i,t} \quad k_{i,t}^{\gamma} \quad h_{2,t}^{1-a-b} k_{c,2,t}^{a} k_{i,2,t}^{b} \tag{2}$$

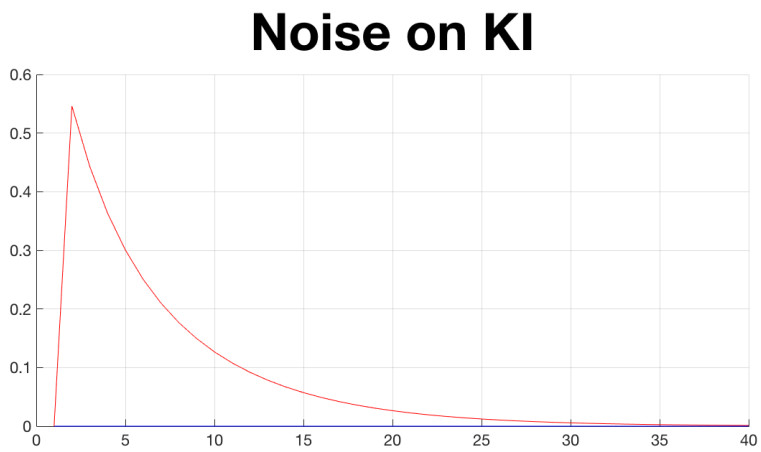
The uses of the outputs are

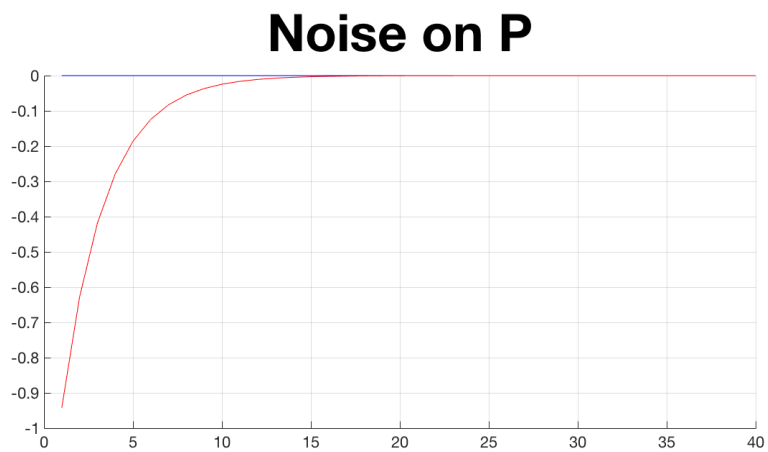
$$y_{c,t} = c_t + i_{c,t} \quad \text{and} \quad y_{i,t} = i_{i,t}$$

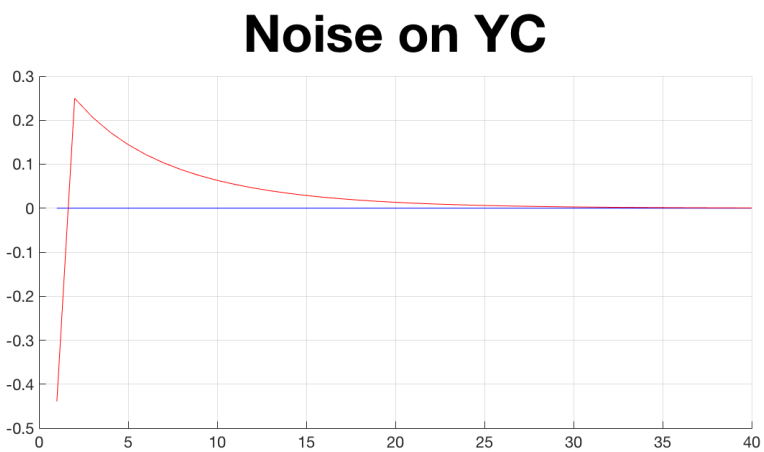
- Noise shock (contemporaneous) is η, $E_t \Gamma_{i,t} = \Gamma_{i,t} + \eta_t$

Model responses









Next steps

- Estimate the spillover parameter γ through IR-matching
- Robustness checks / improving the VAR / completing the VECM
- Your thoughts?