

1. Shocks

Nr. 1

1.4. Technological shocks, anticipations, sentiment shocks

(This part will be taught partly by Guido, partly by me.)

Nr. 2

Technological shocks: Actual or anticipated? Beaudry-Portier

BP estimate a bivariate system in ΔTFP and ΔSP :

$$\begin{bmatrix} \Delta TFP \\ \Delta SP \end{bmatrix} = \begin{bmatrix} a_{11}(L) & a_{12}(L) \\ a_{21}(L) & a_{22}(L) \end{bmatrix} + \begin{bmatrix} e_1 \\ e_2 \end{bmatrix}$$

They consider two identification schemes:

- SR restriction: The second shock has no contemporaneous effect on TFP: $a_{012} = 0$.
- LR restriction: The second shock has no long run effect on TFP: $a_{12}(1) = 0$. (Equivalently: all long-run movements in TFP are due to the first shock).

Main result: The impulse responses of the second shock under SR or the first shock under LR are very similar (Figures 2 and 3, and 8)

- The shock with long run effects on TFP has little initial effect on TFP, but a large initial effect on stock prices
- The shock with no short run effects on TFP has the same dynamic effect on TFP, and a large effect on stock prices.
- When tracing the effects on other variables, initial positive effect on output (0.2%, building over time to 1% after 2 years. id for for C, and I. Little initial impact on hours.

Relation to BQ and Gali papers. In fact, quite similar:

- BQ (bivariate in Δy and u). Little or zero initial impact of “technology shocks” under output, building up. Small increase in unemployment
- Gali (bivariate in $\Delta Y/H$ and H). More of an initial increase in Y/H (0.6%), before build-up after 4 quarters to long-run effects (0.8%). Small decrease in H .

Difference $Y/H/TFP$? Labor productivity is pro-cyclical. But so is measured TFP ($Y/H^{s_h} K^{1-s_h}$).

Beaudry-Portier interpretation:

- Anticipations of technological shocks, increasing demand. (Alternatively, anticipated, but slowly diffusing technology improvements).
- Technological shocks or waves? A time series issue. Slowly changing underlying growth rate of TFP: well captured by VARs?

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Figure 2. This figure displays the responses of TFP and stock prices to a unit e_2 shock and a unit e_1 shock. p. 40.

Beaudry, P., and F. Portier. "Stock Prices, News, and Economic Fluctuations." mimeo UBC, (March 2004), pp. 1-59.

Please see: http://www.bundesbank.de/download/vfz/konferenzen/20041126_27_eltville/vfz_20041126_3.pdf

Nr. 6

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Figure 3. Share of the Forecast Error Variance Attributed to the e_2 shock or the e_1 shock. p. 41.

Beaudry, P., and F. Portier. "Stock Prices, News, and Economic Fluctuations." mimeo UBC, (March 2004), pp. 1-59.
Please see: http://www.bundesbank.de/download/vfz/konferenzen/20041126_27_eltville/vfz_20041126_3.pdf

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Figure 8. Impulse Responses to e2 shocks. p. 46.

Beaudry, P., and F. Portier. "Stock Prices, News, and Economic Fluctuations." mimeo UBC, (March 2004), pp. 1-59.
Please see: http://www.bundesbank.de/download/vfz/konferenzen/20041126_27_eltville/vfz_20041126_3.pdf

Nr. 8

Next questions. taken up by Guido

- Can we construct a model which delivers? Is there a need for nominal rigidities? (Rebello-Jaimovich versus NK models)

- What are the non-technological shocks? “Sentiment, demand”?

Anticipations of technological improvements not realized ex-post?
(Lorenzoni)

Or, just exogenous shifts in pessimism or optimism? Can we tell?
(Cochrane, Barsky-Sims)

- Implications for optimal policy. (Lorenzoni)