

Productivity and the Business Cycle: Evidence for Europe and the US

Discussion on Pricing Behaviour and the Response of Hours to Productivity Shocks

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Plan of the discussion

1. The debate.
2. Summary of M & N paper.
3. Firm-level evaluations.
4. Measuring price stickyness.
5. Measuring technology shock.

The response of labor input to technology shocks

- Do technology shocks *increase* or *reduce* hours worked in the short-run?
- Policy issue: Should economic policy favor innovation?
- Modeling issue: If prices are sticky and monetary policy not highly accommodative, a decrease in labor input is expected. Discriminating stylized fact.
- VAR-based evidence: Galí (99&04), Francis & Ramey (05), Chang & Hong (05).
Direct evidence: Shea (1998), Basu, Fernald & Kimball (04), M & N (05).

Summary of the paper

- Evaluation of the short-run response of labor input to technology shocks, at the firm level.
- Correlation of these responses with indicators of price rigidity, market power and inventory holdings.
- Results: improvements in TFP have contractionary effects on employment, which are larger in firms with
 - ▷ stickier prices (even if the product is highly storable);
 - ▷ more inelastic demand (if prices are flexible).

A firm-level evaluation

- Isn't the most relevant question an aggregate one?

Should we care if a technology shock in reduces employment of firm A and raises that of firm B? [sectors]

- A decomposition in aggregate, sectoral and individual components would be interesting.
- At the aggregate level, emphasis on permanent shocks. Here, you assume an AR(2) process. For the estimated values of the AR coefficients, what do the dynamics look like?

Price stickyness

- M & N use the *unconditional* frequency of price reviews/changes.
- The relevant indicator would measure *conditional* price changes: treats differently firm C, which received shocks but did not adjust its price, and firm D, which did not receive any shock and did not adjust its price.
- How are these indicators related?
- Did firms which high and low frequency of price reviews receive similar technology shocks?

Technology

- Solow residuals rely on an exhaustive and precise observation of productive services. Typically however, factor utilization is poorly observed.
- BFK methodology controls for *omitted variable*: firms simultaneously hire more input and use them more intensively. In a compensated production function, the output elasticity to labor input is larger.
- Is the correction for procyclical utilization time-varying? (does it control for *omitted dynamics*?)