Discussion

"The Cyclical Behavior of Equilibrium Unemployment and Vacancies in the US and Europe" by Alejandro Justiniano and Claudio Michelacci

Thijs van Rens
CREI and Universitat Pompeu Fabra

Annual Workshop of the NBER Group on
Micro and Macro Perspectives on the Aggregate Labor Market

CAP - Cycles, Adjustment, and Policy
Aarhus University, Denmark

November 4-5, 2011
Can a standard model replicate the cyclical properties of the labor market?

Three differences with respect to the literature (Shimer 2005):

1. Many shocks and frictions (transmission mechanisms)
2. Estimate the model using MLE (full information methods)
3. Study several European countries as well as the US
What I like about this paper

- Exercise was long overdue

  “the goal post for modifications of the model is substantially lower when one allows for other sources of employment volatility.”
  (Mortensen and Nagypal 2007)

- Implementation careful and comprehensive
  - Descriptive statistics, priors
  - Moments and impulse responses to discuss identification

- Interpretation results thoughtful
Estimation versus calibration

- Estimation using Bayesian, likelihood-based methods
  - Formal about uncertainty (standard errors) [Comment #1]
  - Full information

- Full information methods use all information in the data, but ...
  - You choose which variables to include as observables
  - You choose which properties of the data the model should match
    - Calibration: drop moments model should not be expected to match
    - Estimation: extend model with ‘frictions’ to match these moments
The frictions (transmission mechanisms)

- Structural frictions
  - Endogenous separations
  - Hiring costs
- Semi-structural frictions
  - Variable capital utilization
  - Wage rigidity
- Ad-hoc frictions [Comment #2]
  - Adjustment costs to investment, \( K_{t+1} = [1 - \delta(j_t)] K_t + e^{\phi_t} \left[ 1 - T \left( \frac{l_t}{l_{t-1}} \right) \right] l_t \)
  - Adjustment costs to vacancies, \( R_t = S_t \left[ 1 - G \left( \frac{S_t}{S_{t-1}} \right) \right] \)
Can a standard model replicate the cyclical properties of the labor market?

Different approach to a familiar question:

- Estimation using full information methods
- Many frictions (transmission mechanisms)

Contributions:

1. Many shocks
2. Study several European countries as well as the US  [Comment#3]
The shocks

- Neutral technology
- Investment-specific technology (MEI)
- Job destruction
- Matching efficiency (‘mismatch shock’)
- Government expenditure (‘aggregate demand shock’)
- Discount factor

Note: Keynesian demand shocks show up as technology shocks (Sveen and Weinke 2008)
Results

(a) Unemployment

(e) GDP
Results

Results about the US:

1. Technology shocks most important driver of fluctuations
2. Investment-specific technology important for output, not for labor market
3. Government expenditure shocks do not matter for labor market

Results about cross-country comparison:

4. Job destruction shocks more important in Europe
5. Matching shocks important in the UK, France (and Norway)
Interpreting the results  [Comment#4]

- Technology shocks most important driver of labor market fluctuations
  - Wage rigidity fixes the Shimer puzzle
  - Technology shocks important where wage rigidity high (US, Sweden)

- Is fiscal stimulus ineffective?

- Are European labor markets more flexible?
  - High volatility JD versus JC suggests low EPL (not in model)
  - Wages are less rigid in Europe ($\theta = 0.20$ in Germany vs 0.57 in US)

- What is special about the UK, France and Norway?
  - Mismatch? (Barnichon and Figura 2011)
  - Matching shocks destroy the Beveridge curve, separation shocks do not
Impulse responses to job destruction shocks
Figure 1: The Beveridge curve in different OECD countries

(a) US

(b) France
Interpreting the results [Comment #4]

- Technology shocks most important driver of labor market fluctuations
  - Wage rigidity fixes the Shimer puzzle
  - Technology shocks important where wage rigidity high (US, Sweden)

- Is fiscal stimulus ineffective?

- Are European labor markets more flexible?
  - High volatility JD versus JC suggests low EPL (not in model)
  - Wages are less rigid in Europe ($\theta = 0.20$ in Germany vs $0.57$ in US)

- What is special about the UK, France and Norway?
  - Mismatch? (Barnichon and Figura 2011)
  - Matching shocks destroy the Beveridge curve, separation shocks do not
Conclusions

What I like about this paper

- Exercise was long overdue
- Implementation careful and comprehensive
- Interpretation results thoughtful

Comments:

1. Exploit the advantage of estimation over calibration
   Report standard errors, test over-identifying restrictions

2. Focus on the contribution of shocks to labor market fluctuations
   Cross-country comparisons are orthogonal, do not require many shocks

3. Be careful interpreting results that depend on ad-hoc frictions
   - “model is successful in reproducing the high serial correlation of vacancies”
   - How credible is an estimate of wage rigidity without data on wages?

4. The results are very interesting. Discuss them!