"Reservation Wages and the Wage Flexibility Puzzle"

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Wage developments in the aftermath of the crisis

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Reservation wages and the wage flexibility puzzle

Three contributions:

1. Wage flexibility puzzle:
   DMP model does not match fluctuations in unemployment and wages
   - Unemployment volatility puzzle, documented in a different way
   - Puzzle is similar, but different
2. New evidence on reservation wages
   - Constructed from micro-data for UK and Germany
   - Reservation wage flexibility puzzle
3. Propose modification of the model that is consistent with the data
   - Reference dependence in reservation wages
   - Makes reservation wage and wage less cyclical

Discussion

- Contributions 2 and 3 make this an important paper
  - Reservation wage plays an important role in search models
  - We know very little about reservation wages in the data
  - Self-reported data are not perfect, but surely informative
  - Reference dependence in reservation wage is plausible, and
  - it is testable with the new data (and supported)
- Contribution 1 is very interesting, but:
  - It is orthogonal to contributions 2 and 3
  - The puzzle is slightly different, but this is not discussed
  - I am not convinced of the difference

Discussion

1.
How is the **wage flexibility puzzle** different from the **unemployment volatility puzzle**?

2.
What explains the different finding?
(**wage rigidity** does not help)

Wage flexibility puzzle cf unemployment volatility puzzle

Aproach

- Unemployment volatility puzzle (Shimer 2005):
  - BC driven by changes in productivity p_t
  - Match data for
$$\frac{\partial \ln u_t}{\partial \ln p_t} \longleftrightarrow \frac{\partial \ln w_t}{\partial \ln p_t}$$
  - Model simulations
- Wage cyclicality puzzle:
  - "agnostic about the nature of demand shocks"
  - Match data for *wage curve*
$$\frac{\partial \ln u_t}{\partial \ln w_t}$$
  - Similar to labor supply elasticity

Wage flexibility puzzle cf unemployment volatility puzzle

Simplified derivation of the wage curve

- Wage shares match surplus

$$w_t = \rho_t + \beta\left(p_t - \rho_t - 0\right) = \beta p_t + \left(1-\beta\right)\rho_t$$

- Profits are constant

$$\frac{p_t - w_t}{r+s} = C + \frac{c}{q_t} = C$$

- Therefore, only wage cyclicality from reservation wage

$$\left(1-\beta\right)w_t = \beta\left(p_t - w_t\right) + \left(1-\beta\right)\rho_t \Leftrightarrow w_t = \beta\left(r+s\right)C + \rho_t$$

- Reservation wage depends on benefits and future wages

$$\rho_t = u_t z + \left(1-u_t\right)w_t$$

- Combining both equations gives the wage curve

$$w_t = z + \frac{\beta\left(r+s\right)C}{u_t} = z + \beta\left(r+s\right)C\frac{s+\lambda_t}{s}$$

Wage flexibility puzzle cf unemployment volatility puzzle

- A stake through the heart of the DMP model!
  - Changes in productivity do not affect unemployment (no congestion externality)
  - Changes job finding and unemployment rate exogenous (?)
- Findings
  - Need implausibly high replacement ratio to match the data (Costain and Reiter 2008, Hagedorn and Manovskii 2008)
  - Wage rigidity (infrequent bargaining) does not help (Pissarides 2009, Haefke, Sonntag and van Rens 2013)
  - even if applies to newly formed matches (*Different from:* Hall 2005, and many others)
- Does the different approach explain the different finding?

Wage rigidity

In the standard model,

- The job finding rate is directly related to the job filling rate

$$\lambda_t = \theta_t^{1-\mu} = \left(\theta_t^{-\mu}\right)^{-\frac{1-\mu}{\mu}} = q_t^{-\frac{1-\mu}{\mu}}$$

- Job filling rate is determined by the JCC

$$\begin{aligned} C + \frac{c}{q_t} &= E_t J_t \\ &= \alpha J\left(w_t^r\right) + (1-\alpha) J\left(w_t^a\right) \\ &= J\left(w_t^r\right) + (1-\alpha)\frac{w_t^a - w_t^r}{r+\phi+s} \end{aligned}$$

- Wage rigidity new matches ('backward looking component')
  - New matches start at the average wage w_t^a with probability $1-\alpha$
  - But this wage is then rebargained with probability ϕ in each period
  - This strongly mitigates the effect on unemployment volatility
    $\phi = 8.3\%$ per month (contract length 1 year) $>> r+s = 1.25\%$

Conclusions

- Paper makes an important contribution
  - New evidence on reservation wages
  - Reference dependence offers plausible and *testable* theory of wage rigidity
  - New data support new theory
- Interesting agenda: wage flexibility puzzle
  - Is it reasonable to assume profits are acyclical?
  - Is this still the same model?
  - Is the puzzle substantively different? How? Why?