Discussion of “Allocative and Remitted Wages: New Facts and Challenges for Keynesian Models” by Susanto Basu and Christopher House

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small edits after conference in red
New experience. I’ve never before discussed

1 A paper by Susanto or Chris
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2. A HOM survey (spectacular range of topics to choose from)
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3. A published survey!
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4. A paper using the CEE model as its benchmark
Empirical overview

1. average hourly earnings acyclical
2. composition bias masks procyclicality

Highlight: recent insights

1. new hire wages: better measurement
2. user cost of labor: better theory leads to novel construct

Integrate mechanisms into medium-scale DSGE

Find: nominal wage frictions problematic

Conclusion: sticky prices more promising modeling framework
Modeling strategy

1. Stick close to CEE framework
2. In particular, use EHL labor market dynamics
3. Add mechanisms to permit
   - Heterogeneous micro labor productivity
   - Labor aggregation
   - Analysis of composition bias
   - Behavior of alternative wage rate measures
4. Empirical analysis of basic and modified CEE
   - My problem: can’t really connect to representative firm
   - My discussion: flesh out a model of this firm
Thinking about the firm

- In tradition of Oi (JPE 62): labor as a quasi-fixed factor
- Representative firm has a workforce of hiring vintages
- Vintage employment depreciates due to separations

\[ z_{t,t-j} = z_{t-1,t-j}(1 - s) \]

- Each vintage may have different contract
- 60% of CPS workers are on salary (\( \omega \) rather than \( w \))
- Total labor cost is

\[ \sum_{j=0}^{J} \omega_{t,t-j} z_{t,t-j} \]

- If hours per worker is variable, total labor input is

\[ \sum_{j=0}^{J} n_{t,t-j} z_{t,t-j} \]

- Firm-worker attachment reflects specialized human capital
Hiring

- Hiring is always going on for representative firm
- Recession involve 8 million net job losses (Dec 07 - June 09)
- But hiring was 3-5 million per month
- So, representative firm always has option to hire this period or next
- Oi: hiring based on PDV of costs
- Oi: hiring costs, training costs, and payments to labor

\[ \nu_t = \sum_{j=0}^{\infty} m_{t,t+j}\omega_{t,t+j}(1-s)^j + H_t + K_t \]

- Oi used finite horizon and fixed discount factor
- Oi stressed importance of mitigating turnover, but omitted it in PDV
- Oi: hiring requires PDV of worker product is at least this value.
User cost

- Hall & Jorgenson for capital
  - implicit rental price $p_t^k - \frac{1-\delta}{1+r_t} p_{t+1}^k$
  - Hall: generality
    - does not depend on resale markets
    - only requires positive investment in both periods.
  - Lucas: temporary movements in prices (taxes)

- Labor as a quasi-fixed factor
  - Standard view: convex employment adjustment costs (e.g., Bils 85)
  - But large EAC hard to square with employment volatility
  - Kudlyak: quasi-fixity in search models
  - Kudlyak: user cost of labor is relevant measure with quasi-fixity
Defining user cost (employee)

- Consider adding an employee this period
- With separations, one more employee this period yields \((1-s)\) more employees next period
- Ignore discrete nature (large firm, lots of hiring)
- Ignore productivity differences: gains after longer work experience
- Can always hire immediately (probabilistic hiring: more leads)
- Expected PDV savings on future employee (to keep future workforce constant)

\[
E_t \sum_{j=1}^{\infty} m_{t,t+j} \omega_{t+1,t+j+1}(1-s)^{j-1} + E_t m_{t,t} (H_{t+1} + K_{t+1})
\]
Defining user cost (employee)

- User cost (Kudlyak eqn (2))

\[ q_t = \omega_{t,t} + E_t \sum_{j=1}^{\infty} (1 - s)^j m_{t,t+j} (\omega_{t,t+j} - \omega_{t+1,t+j}) \]

\[ + (H_t + K_t) - E_t m_{t,t} (H_{t+1} + K_{t+1}) \]

- Terms: "new hire wage/compensation" \( \omega_{t,t} \)

- Terms: "expected cost of accelerating hiring":

\[ E_t \sum_{j=1}^{\infty} (1 - s)^j m_{t,t+j} (\omega_{t,t+j} - \omega_{t+1,t+j}) \]

- I’ll neglect: changes in other costs (Kudlyak does not (search costs))
Why is user cost so volatile cyclically?

- Common finding for Kudlyak and Basu-House. Why?
  1. Intuitively, vintage effects evident in wage/compensation profiles
  2. Empirical evidence from various sources
  3. Suggests expected cost of accelerating hiring is important

- Example to think about elasticity (upper bound):
  1. permanent vintage effect, constant discount factor
  2. \( SS \ q = w \), define \( \theta = [1 - \beta(1 - s)]^{-1} \approx \frac{1}{r+s} \) about 3 for annual data

\[
q_t = \frac{1}{1 - \beta(1 - s)} \left[ w_{t,t} - \beta(1 - s) E_t w_{t+1,t+1} \right]
\]

\[
\frac{q_t}{q} = \theta \frac{w_t}{w} - (\theta - 1) \frac{E_t w_{t+1,t+1}}{w}
\]

- Main concerns about estimates by K and BH on NLSY:
  1. Empirical procedure: construct ex post user cost. Under RE, ok for projections on date \( t \) variables, but must be careful more generally.
  2. Why does K estimate \( \frac{\Delta \log(w_{nh})}{\Delta u} = -3 \) and BH estimate = -0.7?
Moving toward macro

- How does firm get more labor input?
- EHL model:
  1. workers are monopoly suppliers with sticky nominal wages
  2. respond to firm’s demand with supply at given wage rate
- Alternative #1 in firm model: implicit contract (risk-shifting, commitment)
  1. salaried workers work harder as part of contingent contract
  2. high demand for firm with pre-set nominal price is just one contingency
  3. no variation in firm’s total cost from pre-existing workforce
  4. salary structure irrelevant; labor share countercyclical
  5. if have hours measures, then these impart bias ($\omega/n$).
  6. economists can’t measure marginal cost using wage data
  7. marginal cost only from preferences, production function
- Alternative #2 in firm model: Look at other workers
  1. 40% of workers on hourly rates
  2. Bils: marginal wage rates are key (JPE 85, AER87)
But employment rather than hours dominates cycle

- Rogerson/Prescott/Hansen: business cycle fact
- Let base workforce be $Z_{t-1} = (1 - s) \sum_{j=1}^{J} z_{t-1, t-j}$.
- Let $h_t$ be the proportion of its workforce that a firm seeks to hire
- Let the hiring costs be $\Psi(h_t)Z_{t-1}$
- Then, the outcomes are
  
  $$
  z_{t,t} = h_t Z_{t-1}
  $$
  
  $$
  Z_t = [1 + h_t] Z_{t-1}
  $$

- Firm-specific investments are the glue that make labor like capital
- Hiring costs are like adjustment costs for capital stock (can be small)
- Marginal cost of output with $Y_t = F(Z_t, K_t)$:
  
  1. increase $h_t$ to get more $z_{t,t}$
  2. user cost $q_t$ measured to be strongly procyclical
  3. MC somewhat more cyclical than $q_t$
How cyclical are new hire real wages (salaries)?

1. Correction for composition bias important (masks procyclicality)
2. Bils and SBP found more wage procyclicality for job changers than for job stayers
3. Haefke et al find strong procyclicality for new hires in PSID and CPS
4. In CPS, even stronger for job changers than for new hires

What makes user cost even more procyclical?

1. K & BH estimate positive history dependence
2. High starting wage/salary persists over time (recall example)

Problems for "old" New Keynesian model advocated by BH

1. Reset prices are based on real marginal cost
2. If marginal cost more responsive to demand, so is inflation
3. Inflation can feedback into demand, cutting amplification and persistence