Recall and Unemployment

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1. Large number of workers return to the same employer after job separation
   - In SIPP, more than 40% of workers separating into U are recalled

2. Recalls and new hires are quite different in terms of:
   - Individual labor market outcomes
   - Cyclical sensitivity of job finding (or rehire) probabilities

3. Recalls impact empirical matching function
   - Recalls do not require the matching process
   - Excluding recalls from the estimation $\Rightarrow$ significant changes in elasticity estimate and time series of matching efficiency

4. Develop a MP matching model with recall option
   - Match cross-sectional and time-series facts (at least qualitatively)
Comparison to Katz (1986), and Katz and Meyer (1990)

- Many of our cross-sectional facts are documented by Katz (1986) and Katz and Meyer (1990)
- Our results are based on nationally representative sample over a much longer period
- Our business cycle facts are entirely new
CPS Evidence on TL

- CPS only identifies Temporary Layoffs (TL)
  - Recall is ex-post outcome and TL capture ex-ante expectation

- Diminished role of TL (?)
  1. Small share in stock
  2. Much larger share in flow

- Bottom line
  1. TL are still important for flow analysis
  2. TL are fairly common even outside manufacturing and construction
### SIPP: Recall Rates (Shares)

<table>
<thead>
<tr>
<th>Panel</th>
<th>Separations in waves</th>
<th>EU Recall rates</th>
<th>EU Counts</th>
<th>EU \cdot \cdot UE Recall rates</th>
<th>EU \cdot \cdot UE Counts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>1–6</td>
<td>0.408</td>
<td>3,725</td>
<td>0.45</td>
<td>3,388</td>
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<tr>
<td>2001</td>
<td>1–3</td>
<td>0.402</td>
<td>1,764</td>
<td>0.45</td>
<td>1,555</td>
</tr>
<tr>
<td>2004</td>
<td>1–6</td>
<td>0.422</td>
<td>1,610</td>
<td>0.49</td>
<td>1,369</td>
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<tr>
<td>2008</td>
<td>1–3</td>
<td>0.414</td>
<td>2,669</td>
<td>0.53</td>
<td>2,096</td>
</tr>
</tbody>
</table>
SIPP: Recall Rates (Shares) by Reason

<table>
<thead>
<tr>
<th>Panel</th>
<th>Separations in waves</th>
<th>Temp. Layoffs</th>
<th>Perm. Separations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Recall Rates</td>
<td>Counts</td>
<td>Recall Rates</td>
</tr>
<tr>
<td>1996</td>
<td>1–6</td>
<td>0.845</td>
<td>1,482</td>
</tr>
<tr>
<td>2001</td>
<td>1–3</td>
<td>0.867</td>
<td>679</td>
</tr>
<tr>
<td>2004</td>
<td>1–6</td>
<td>0.864</td>
<td>663</td>
</tr>
<tr>
<td>2008</td>
<td>1–3</td>
<td>0.873</td>
<td>997</td>
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</table>

Punchline: about 20% of permanently separated (PS) workers are recalled
1. Mean duration
   - Recalls are quick
   - New hires take time

2. Duration dependence
   - Exit to recalls becomes less likely as duration gets longer
   - Exit hazard to new job is flat

3. Firm tenure
   - Workers with long firm tenure: much more likely to be recalled
     - More than 60% of workers recalled if tenure $\geq$ 3 years

4. Occupation switch after job separation
   - Recall: no occupation switch
   - New job: most of the time ($>70\%$)

5. Wage change after job separation
   - Recall: no wage change
   - New job: significant wage decline after long U duration
Estimation of Matching Function: Standard Procedure

- Cobb-Douglas specification

\[
\ln \left( \frac{UE_t}{u_t} \right) = \mu + \alpha \ln \left( \frac{v_t}{u_t} \right) + \varepsilon_t
\]

- \( \alpha = \) elasticity
- \( \varepsilon_t = \) matching efficiency
Estimation of Matching Function: Our Procedure

- Cobb-Douglas specification

\[
\ln \left( \frac{UE_t - \text{recalls}_t}{u_t} \right) = \mu + \alpha \ln \left( \frac{v_t}{u_t} \right) + \varepsilon_t
\]

- Share \(\text{recalls}_t/UE_t\) countercyclical, negatively correlated with job market tightness

- Estimates of elasticity \(\alpha\) and matching efficiency \(\varepsilon_t\) biased in standard procedure
Figure: Share of Recalls in UE flow

Quarter
Recall Rate (SIPP) Share of TL hires (CPS)
Missing Obs. of SIPP Recall Rate
### Estimation Results

#### Table: Estimation Results With and Without Recall Adjustment

<table>
<thead>
<tr>
<th>Estimated Equation</th>
<th>Adjusted Eqn</th>
<th>Standard Eqn</th>
<th>Adjusted Eqn</th>
<th>Standard Eqn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elasticity</td>
<td>0.47</td>
<td>0.40</td>
<td>0.54</td>
<td>0.42</td>
</tr>
<tr>
<td></td>
<td>(0.019)</td>
<td>(0.018)</td>
<td>(0.018)</td>
<td>(0.014)</td>
</tr>
<tr>
<td>Constant</td>
<td>-5.25</td>
<td>-4.29</td>
<td>-5.77</td>
<td>-4.43</td>
</tr>
<tr>
<td></td>
<td>(0.146)</td>
<td>(0.139)</td>
<td>(0.136)</td>
<td>(0.104)</td>
</tr>
<tr>
<td>Adj-$R^2$</td>
<td>0.86</td>
<td>0.84</td>
<td>0.93</td>
<td>0.93</td>
</tr>
<tr>
<td>Sample Size</td>
<td>95</td>
<td>95</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>Measure of $s_t$</td>
<td>CPS TL hires</td>
<td>n.a.</td>
<td>SIPP recall</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

- Significant downward bias in the elasticity of the standard matching function estimation
Matching Efficiency

Figure: Implied Matching Efficiency Series

Quarter
Unadj. Matching Efficiency
Adj. Matching Efficiency
Brief Summary of the Model

1. Extension of the Mortensen-Pissarides model with endogenous separation
2. Idiosyncratic productivity evolves stochastically even after separation (the worker is attached to a certain employer)
   - Changes in idiosyncratic and aggregate conditions generate recalls
3. Recalls do not go through the matching function
4. Workers waiting for a recall can look for a job elsewhere; new hire is mediated by the matching function
5. Once the worker is hired by a different firm, the recall option is lost
Key Results

- Negative duration dependence for recalled workers through selection
- New-hire job finding rate (New Hires/U) is procyclical as in the standard model
- Recall probability (Recalls/U) is nearly acyclical. In a recession:
  1. Firm’s demand for recalling worker drops; BUT
  2. Larger separation flows $\Rightarrow$ larger pool of “recallable” workers
  3. Workers are more likely to be available for recall
- Share of recalls out of all hires is countercyclical as in the data
A large portion of observed hiring flows does not involve labor reallocation.

Countercyclicality of recall share $\Rightarrow$ "mismatch" in the labor market may be more severe in a downturn (e.g., GR).

Future work: implications for the relative importance of firm- and occupation-specific human capital, loss of "recall capital" due to plant closings, etc.