Discussion of

Liberalized Trade
and Worker-Firm Matching

Carl Davidson, Fredrik Heyman, Steven Matusz,
Fredrik Sjöholm and Susan Zhu

Oleg Itskhoki
Princeton University

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### Summary

<table>
<thead>
<tr>
<th></th>
<th>1995</th>
<th>2005</th>
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</thead>
<tbody>
<tr>
<td><strong>Firms</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0.26</td>
<td>0.29</td>
</tr>
<tr>
<td>L</td>
<td>0.24</td>
<td>0.21</td>
</tr>
<tr>
<td><strong>Workers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>0.26</td>
<td>0.24</td>
</tr>
<tr>
<td>L</td>
<td>0.24</td>
<td>0.26</td>
</tr>
<tr>
<td><strong>Matching</strong></td>
<td>0.04</td>
<td>0.14</td>
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1. assortative matching increases over time, along with globalization
2. the pattern is stronger in comparative advantage sectors that liberalize trade
3. \( H \) workers are more likely to be reemployed in \( H \) firms
   - stronger in export-oriented sectors
   - stronger for workers from previous \( HH \) matches
Continuous measure of worker and firm effects
From longer paper (Globalization and Labor Market Sorting)
What additionally I would like to know

1. Is it a lot or a little of assortative matching?

2. How important is between-industry trade for Sweden?

3. Is assortative matching driven by observables or unobservables?
   — covariance structure for all four components

4. Is assortative matching a within or between sector phenomenon?
   — does the answer depend on component of wages
     (worker vs firm effects, observables vs unobservables)
   — HIMR: observables matter more across sectors

5. What happens to the match component?

6. Link to wage inequality?
• Why do we care about matching?
  1. inequality
  2. efficiency of allocation

• A large number of theories consistent with the findings on assortative matching:
  — can we distinguish between them?  or rather
  — take this as unconditional facts on matching patterns?

• What is the evidence in favor of frictional versus competitive matching?
Theory

- Why do we care about matching?
  1. inequality
  2. efficiency of allocation

- A large number of theories consistent with the findings on assortative matching:
  - can we distinguish between them? *or rather*
  - take this as unconditional facts on matching patterns?

- What is the evidence in favor of frictional versus competitive matching?

- Transition probabilities reject random matching?

  *H*-worker transition probabilities:

<table>
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<tr>
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<th>Comp. advantage</th>
<th>disadvantage</th>
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<tr>
<td>$H \rightarrow H$-job</td>
<td>61%</td>
<td>54%</td>
</tr>
<tr>
<td>$L \rightarrow H$-job</td>
<td>40%</td>
<td>28%</td>
</tr>
</tbody>
</table>

  — consistent with on-the-job search or multidimensional matching
Identification

- Two-way fixed effects wage regression:

\[ w_{ijt} = \alpha_i + \theta_j + \epsilon_{ijt} \]

- \( i \) for worker, \( j \) for firm

Identification issues:
1. Non-consistency/small sample bias
2. Not enough worker mobility (66\% never change jobs)
3. Functional form (e.g., non-monotonicity)
4. Non-random transitions of workers
Identification

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Non-random Transitions

Example

• Assume a stylized example:
  - \( a_L = a - \delta \), \( a_H = a + \delta \)
  - \( \theta_L = \theta - \lambda \), \( \theta_H = \theta + \lambda \), \( \theta = 0 \)
  - \( \pi_{LL} = \pi_{HH} = \frac{1}{4}(1 + \omega) \), \( \pi_{LH} = \pi_{HL} = \frac{1}{4}(1 - \omega) \), \( \omega \in [0, 1] \)

• Wages: \( w_{ij} = a_\tau(i) + \theta_\sigma(j) + \epsilon_{ijt} \), \( \tau, \sigma \in \{L, H\} \), \( \epsilon_{ijt} = 0 \)
Non-random Transitions

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- Wages: \( w_{ij} = a_{\tau(i)} + \theta_{\sigma(j)} + \epsilon_{ijt}, \ \tau, \sigma \in \{L, H\}, \ \epsilon_{ijt} = 0 \)

- Then we estimate using within transformation for workers:
  \[
  \hat{a}_L = a - (\delta + \lambda \omega) < a_L, \quad \hat{a}_H = a + (\delta + \lambda \omega) > a_H, \\
  \hat{\theta}_L = -\lambda (1 - \omega^2) > \theta_L, \quad \hat{\theta}_H = \lambda (1 - \omega^2) < \theta_H.
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\]

• Good news: \( \hat{\theta}_H > \hat{\theta}_L \) in this simple example
• Bad news: bias gets worse as \( \omega \) increases
• One can test \( H_0 : \omega = 0 \)
Resolution

- What is the way out of this vicious circle?
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- Structural estimation!