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# Discussion of "Matching Efficiency and Business Cycle Fluctuations"

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October 2012

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Discussion: Matching Efficiency and Business Cycle Fluctuations

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Overview			

## Overview

- Estimate contribution of declines in matching efficiency (ME) during the Great Recession
- Key ingredients of the model:
  - Pre- and post-match hiring costs
  - Sticky prices
- Quantitative and qualitative effects of ME shock may depend on:
  - Relative importance of pre-match cost vs. post-match cost

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- Flexible prices vs. sticky prices
- Nice exercise!

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Outline				

## Outline

- Effects of ME shock in various environments
  - Flexible prices vs. sticky prices
  - Persistent vs. i.i.d. ME shock
  - Pre-match vs. post-match hiring cost
- Questions about their results
- General comments

	Effects of ME shock	Questions	Some General Comments	Conclusion
Flexible Prices and Pre-	Match Cost			

#### Flexible Prices and Pre-Match Cost: i.i.d. ME Shock

- Standard Pissarides model
- Job creation condition

$$\frac{c}{\beta q(\theta)} = (1 - \pi) \mathbb{E}S(\bar{x})$$

where  $\mathbbm{E}$  w.r.t. ME process, and S=J+W-U

1. Lower ME this period

2.  $q(\theta) \Downarrow$  while RHS remains the same  $\Rightarrow \theta$  declines

- 3. Increase in u and decrease in v
- 4. Usual negative correlation between u and v
- Call this cost channel

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Flexible Prices and Pre-	Match Cost			

#### Flexible Prices and Pre-Match Cost: Persistent ME Shock

Job creation condition

$$\frac{c}{\beta q(\theta)} = (1 - \pi) \mathbb{E}S(\bar{x})$$

where S = J + W - U

1. The same force as in the previous case exists but...

2. Lower ME decreases  $U \Rightarrow S(\bar{x})$  increases

- 3. More vacancy postings
- 4. Higher u and v = shifts in BC
- Corr. depends on persistence of ME shock
- ► Higher persistence ⇒ positive correlation
- Call this bargaining channel

	Effects of ME shock	Questions	Some General Comments	Conclusion
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Sticky Prices and Pre-N	latch Cost			

#### Sticky Prices and Pre-Match Cost: Persistent ME Shock

- Positive U-V comovements
- Due to goods price stickiness, v increase to meet the targeted employment level
- Under persistent ME shock
- One question... come back in a few slides

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Post-Match Hiring Cost				

## Post-Match Hiring Cost

- "Neutrality" result: no effects on (un)employment
- Intuition:
  - 1. Employment decision is made independent of efficiency of the matching market
  - 2. Vacancies are determined as a "residual" to achieve targeted employment level
- ▶ Decline in matching efficiency  $\Rightarrow$  increases in v and no change in u

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	Effects of ME shock	Questions	Some General Comments	Conclusion
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Main Results				

## Main Results I

- ME shock does not produce a negative U-V relation under price stickiness and persistent ME shock
  - Negative correlation is possible only when prices are flexible and ME shock is not persistent
- Implication: ME shock is quantitatively unimportant (on average)
  - ▶ We rarely observe large positive U-V comovement

	Effects of ME shock	Questions 000	Some General Comments 00	Conclusion 0
Main Results				

## Main Results II

- But during the Great Recession:
  - 1. Large negative ME shock
  - 2. Vacancies recovered much more quickly, while unemployment is persistently high
- Contribution of ME shock to high unemployment is not trivial

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00 Real Wage Rigidity	000000	000	00	

## Real Wage Rigidity and Pre-Match Cost

- Recall U-V positive correlation under price stickiness and persistent ME shock
- In the model, real wage is rigid
- It should weaken the bargaining channel; the cost channel can be dominant
- So the negative U-V comovements can emerge
  - 1. Lower ME
  - 2. Worker faces a lower job finding rate, but...
  - 3. Wage is rigid (too high), and so...
  - 4. Incentive to job creation does not recover
  - 5. Higher u and lower v
- Question: why strong positive correlation in the exercise?

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Dominant Role of	Post-Matching Hiring Cost			

#### Dominant Role of Post-Matching Hiring Cost

- Share of post-match hiring cost is estimated to be very high
- A priori reasonable, but the reason is not entirely clear
  Where is the identification coming from?
- Pre-match cost small *relative* to post-match cost but how small is it? Evidence?

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What is Bargaining Sho	ck			

## What is Bargaining Shock?

- Shock to the bargaining power is used in the literature
- Effective worker bargaining power is procyclical since JF rate is procyclical in the model
  - Why do you need this shock?
- This shock directly affects job creation motives and thus plays an important role
  - It made a large contribution to unemployment behavior in 2004-2010
- Interesting to see the estimation results without this shock

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#### Some General Comments

- 1. Endogenous separation
- 2. Hiring costs

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Endogenous Separation			

## Endogenous Separation

- Separation rate is countercyclical
- Endogenizing EU transition completely changes quantitative results
- One may prefer constant separation rate because it produces a positive U-V correlation
  - Constant sep. rate is counterfactual
- Fujita and Ramey (2012): OJS fixes this problem
  - Countercyclical EU transition, procyclical job-to-job transition, negative U-V correlation
  - Integrating OJS with NK framework does not seem too challenging

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Hiring Costs			

# Hiring Costs

- Fujita and Moscarini (2012)
- More than 40% of EU flows are rehired by the same employer (recall)
- Implications:
  - 1. No official vacancies
  - 2. Neither pre- or post-match hiring costs

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## Conclusion

- Meaningful quantitative exercise
- Result: ME shock = positive U-V comovement
- How robust is it?
- Would have been even more interesting if ME shock leads to negative U-V comovement
  - Similar to Hosios (1994)