Japan's Labor Market Cyclicality and the Volatility Puzzle

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Stylized Facts

Table 1: Japan and U.S. Labor Market Cyclical Properties

	Japan							U.S.						
	u	v	v/u	f	s	Prod. y/n	Prod. TFP	u	v	v/u	f	s	Prod. y/n	Prod. TFP
Std. Dev.	0.05	0.09	0.13	0.08	0.09	0.01	0.01	0.08	0.10	0.18	0.06	0.05	0.01	0.01
Autocorr.	0.81	0.93	0.93	-0.08	0.10	0.41	0.62	0.88	0.85	0.87	0.71	0.59	0.70	0.64
Cross-corr.														
u	1	-0.69	-0.75	-0.24	0.32	-0.47	-0.54	1	-0.91	-0.97	-0.87	0.79	0.13	-0.19
v		1	0.99	0.34	-0.51	0.46	0.70		1	0.98	0.83	-0.76	0.11	0.15
v/u			1	0.33	-0.51	0.50	0.72			1	0.87	-0.79	0.004	0.17
f				1	-0.59	0.16	0.26				1	-0.58	-0.11	0.22
s					1	-0.23	-0.37					1	-0.06	-0.09
Prod. y/n						1	0.91						1	0.30
Prod. TFP							1							1

Shimer (2005)

- The standard search and matching model becomes a canonical framework to account for the equilibrium unemployment.

- "The textbook search and matching model cannot generate the observed business-cycle frequency fluctuations in unemployment and job vacancies in response to shocks of a plausible magnitude."

- "It is important to stress that this is not an attack on the search approach to labor market, but rather a critique of the commonly-used Nash bargaining assumption for wage determination."

Hagedorn and Manovskii (2008) and after

- The problem is not a failure of the model itself, but just a failure of the calibration method.

- By reducing firm's expected profit, we can amplify the percentage change of job vacancies, which generates enough volatility of the market tightness.

- But the volatility of the market tightness inevitably accompanies with distortion of the job finding rate in their work.

- Researchers are going further to the question about which one is larger impact on the unemployment volatility, the fluctuation of job finding rate and separation rate.

Esteban-Pretel et al (2010)

Table 3: Simulation Results

Std. Dev.	u	v	v/u	f	s	Prod. y/n	Prod. TFP
Data	0.049	0.087	0.13	0.084	0.091	0.010	0.010
Model 1: Exog. Dest.	0.0013	0.0047	0.0054	0.0027		0.010	
	(0.0002)	*(0.0005)*	*(0.0006)*	*(0.0003)*		*(0.0011)*	
Model 2: Endog. Dest.	0.025	0.021	0.015	0.008	0.044	0.010	
	(0.0046)	*(0.0032)*	*(0.0016)*	*(0.0008)*	*(0.0048)*	*(0.0011)*	
Model 3: RBC + Endog. Dest.	0.282	0.270	0.018	0.011	0.507		0.010
	(0.055)	*(0.053)*	*(0.002)*	*(0.001)*	*(0.063)*		*(0.001)*

Autocorr.	u	v	v/u	f	s	Prod. y/n	Prod. TFP
Data	0.82	0.93	0.93	-0.083	0.097	0.41	0.62
Model 1: Exog. Dest.	0.78	0.33	0.41	0.41		0.41	
	(0.047)	*(0.100)*	*(0.100)*	*(0.100)*		*(0.100)*	
Model 2: Endog. Dest.	0.78	0.65	0.41	0.41	0.41	0.41	
	(0.046)	*(0.075)*	*(0.10)*	*(0.10)*	*(0.10)*	*(0.100)*	
Model 3: RBC + Endog. Dest.	0.82	0.82	0.51	0.51	0.51		0.62
	(0.043)	*(0.042)*	*(0.094)*	*(0.094)*	*(0.094)*		*(0.083)*

Comments

- An original model based on Japanese labor market.
  - composition of job searchers
    - Much smaller portion of on-the-job searchers
    - Larger portion of young workers in the unemployment pool
  - wage determination
    - Is Nash bargaining relevant in Japan?
  - job duration
    - Lifetime employment system?
- Calibration Strategy
  - Carefully targeting on separation rate
  - Focusing on the unemployment fluctuation