#### Labor Market Participation, Unemployment, and Monetary Policy

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Discussion by Christian Haefke IHS Vienna



#### **The Contribution**

- Intro
- The Contribution

Key Issues

3 LF States

IE & SE

Cost of Participation

Volatilities

Summary



"Introducing labor market frictions in a New Keynesian model with variable participation should thus be high on the agenda."

"Unemployment Fluctuations and Stabilization Policies: A New Keynesian Perspective"



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"Unemployment Fluctuations and Stabilization Policies: A New Keynesian Perspective"

- "Introducing labor market frictions in a New Keynesian model with variable participation should thus be high on the agenda."
- Incorporates labor market frictions apart from sticky wages.
- Wage bargaining rather than unilateral wage setting.

Christian Haefke on

Campolmi/Gnocchi: Labor Market Participation and Monetary Policy – 2 / 11



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"Unemployment Fluctuations and Stabilization Policies: A New Keynesian Perspective"

- "Introducing labor market frictions in a New Keynesian model with variable participation should thus be high on the agenda."
- Incorporates labor market frictions apart from sticky wages.
- Wage bargaining rather than unilateral wage setting.
- Perfect consumption insurance across households.

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Intro The Contribution Key Issues 3 LF States IE & SE Cost of Participation Volatilities Summary Implications of monetary policy differ substantially with/without participation margin.

Shocks change tradeoffs: and usually imply income and substitution effects. What can we learn from the labor literature?



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 Extensive margin for labor adjustment:
Need to understand cost of participation and labor supply elasticities in theory and data.



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Unemployment volatility puzzle:
S&M models have a hard time matching unemployment
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Interaction labor market and monetary policy.



#### Flow Data and Model

#### Intro

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Flow Data and			
Model			

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	CG	Data 1983–2011
Separation Rate (qrt)	12.00%	11.94%
Job Finding Prob.(qrt)	65.72%	58.72%



#### Flow Data and Model

Intro		CG	Data 1983–2011
3 LF States Flow Data and	Separation Rate (qrt)	12.00%	11.94%
IE & SE	Job Finding Prob.(qrt)	65.72%	58.72%
Cost of Participation		CG	Consistent Data
Volatilities	Separation Rate (qrt)	12.00%	3.97 %
Summary	Job Finding Prob.(qrt)	65.72%	58.72 %

	Model	Data
Separations	$E \to U$	$E \to U$
		$E \to N$
Job Finding	$U \to E$	$U \to E$
		$N \to E$



## IE & SE

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IE & SE

IE & SE

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Summary

Household picks N to equalize marginal utility of consumption and home productivity. Consider a productivity shock:

SE:  $N \to U$ 

 $\mathsf{IE}:\ U\to N$ 

 Cullen/Gruber (JOLE, 2000): Husband Wife
\$100 more UI benefits work 15 hours less per month likelihood of work ↓ 13%.

Added Worker Effect:
Faraglia, Ortigueira/Siassi

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Home Production, h

American Time Use Time Searching

Volatilities

Summary

 $U(C_t, E_t, U_t) = Z_t \ln(C_t) + \phi \frac{h_t^{1+\nu}}{1+\nu}$  $h_t = [\xi_t (1 - E_t - \Gamma U_t)]^{1-\alpha_h}$ 

 $\Gamma = 1, \Gamma = 0.$ 



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**Full employment**  $\Rightarrow$  h = 0, Data?



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Interaction of  $\nu$  and  $\alpha_h$  for Frisch LS ela?



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**Full employment**  $\Rightarrow$  *h* = 0, Data?

- Interaction of  $\nu$  and  $\alpha_h$  for Frisch LS ela?
- How did you pick  $\alpha_h = \frac{1}{3}$ ?



#### **American Time Use**

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#### **All Households:**

Status	P-Care	Leisure	Homework	Work	Education
E	618.13	266.06	109.41	338.67	17.43
U	662.63	406.67	146.66	36.66	68.53
Ν	676.14	437.30	174.42	4.07	42.03



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#### Age 25–60:

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Status	P-Care	Leisure	Homework	Work	Education
E	610.99	254.65	115.06	356.77	6.77
U	639.76	393.68	192.14	51.68	19.08
Ν	664.87	393.22	201.55	5.74	16.80

ATUS: 2003 – 2011, SE mean  $\approx 3$  minutes



### **Time Searching**

Intro		Weekday	All Days
<u>IE &amp; SE</u>	Average over	all people	
Cost of Participation	Employed	0.71	0.59
Home Production, $h$		(0.05)	(0.04)
Time Searching	Unemployed	28.98	22.92
Volatilities		(1.49)	(0.93)
Summary	Not in LF	0.55	0.43
		(0.08)	(0.05)
	Average over	people with <u>p</u>	positive search minutes
	Employed	91.39	92.35
		(5.01)	(4.23)
	Unemployed	139.89	135.72
		(5.09)	(4.26)
	Not in LF	113.47	109.62
		(11.05)	(9.09)

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#### **Extra Moments**

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Extra Moments

Shock(s)

Summary

Small  $\Gamma \rightarrow$  smaller benefit of being employed  $\rightarrow$  smaller worker surplus!  $\rightarrow$  more action.

	$\Gamma = 0.44$	$\Gamma = 0.99$
$\sigma_y$	1.12	
$\sigma_u$	5.43	1.16
$\sigma_{e}$	0.34	0.07
$\sigma_p$	0.27	0.06



#### **Extra Moments**

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Some extra useful checks:

• Costain/Reiter statistic:  $\frac{du}{d \ln b} \approx 2$ ;

Balleer: Unemployment response to technology shock;

■ Haefke/Sonntag/van Rens:  $\frac{d \ln W}{d \ln Z} \approx 0.8$ .



# Shock(s)

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Shock(s)

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#### Technology Shock

- Sticky prices lead to opposing movements in employment and wages.
- Dampening of participation response.



# Shock(s)

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#### Technology Shock

- Sticky prices lead to opposing movements in employment and wages.
- Dampening of participation response.
- **Monetary Policy Shock** (or preference shock):
  - Employment and wages move in same direction.
  - Reinforcement of participation response.
  - Labor Supply elasticity crucial!
  - Helpful to distinguish between Gali (2010) and Christiano et al (2010)



### Summary

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Summary

- Theory: Small Search Costs  $\rightarrow$  Small Surplus  $\rightarrow$  Larger Effects.
- Data: Search costs probably smaller than in this setup?  $\rightarrow$  Larger Participation Response.
- Participation and monetary expansion?
  - Labor supply elasticities;
  - ◆ Gali vs. Christiano et al.
- Use more moments as overidentifying restrictions.