

DISCUSSION OF  
"THE CYCLICALITY OF THE OPPORTUNITY  
COST OF EMPLOYMENT"  
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# THE OPPORTUNITY COST OF EMPLOYMENT

The goal is to accurately measure:

$$\underbrace{z_t}_{\text{Flow utility of U}} = \underbrace{\xi_t}_{\text{Leisure component}} + \underbrace{b_t}_{\text{Transfers tied to U}}$$

- ▶  $\xi_t$ :
  - ▶ Use large household model
  - ▶ Estimate  $C_u/C_e$  using micro evidence from CEX/PSID
- ▶  $b_t$ :
  - ▶ Programs: UI, SNAP, TANF, Medicaid
  - ▶ Micro evidence to disentangle component tied to U
  - ▶ Aggregate data on dollars spent

Finding:  $\xi_t$ , strongly pro-cyclical,  $b_t$  counter-cyclical but  $b_t \ll \xi_t$ , so  $z_t$  is pro-cyclical, elasticity wrt productivity  $\approx 1$

# WHY $z_t$ ? AND WHY CYCLICALITY?

- ▶ Ultimately, interested in understanding dynamics of the labor market
- ▶  $z_t$  in the context of DMP:
  - ▶ Surplus from employment  $p_t - z_t$
  - ▶ Surplus split by bargaining, worker bargaining power determines  $w_t$
  - ▶ Firm profits  $\pi_t = p_t - w_t$
  - ▶ To generate dynamics need volatile  $\pi_t$ , can be achieved by depending on level and cyclical volatility of  $w_t$
  - ▶ If elasticity of  $z_t$  wrt  $p_t$  is less than that of  $w_t$ , can adjust level and bargaining power to generate volatility

# THE LARGE HOUSEHOLD

$$\xi_t = \frac{\overbrace{[U^u(C_t^u, 0) - \lambda_t C_t^u]}^{\text{Leisure of Unemployed}} - \overbrace{[U^e(C_t^e, 0) - \lambda_t C_t^e]}^{\text{Leisure of Employed}}}{\underbrace{\lambda_t}_{\text{Marginal utility wrt C}}}$$

What happens when  $p$  increases?

- ▶ Wages of employed increase  $\Rightarrow$  household is wealthier
- ▶ Consumption of employed goes up  $\Rightarrow \lambda \downarrow$
- ▶ Perfect risk sharing between E & U  $\Rightarrow$  consumption of unemployed goes up
- ▶ High wages of E subsidized U
- ▶ Pro-cyclical  $w \Rightarrow$  pro-cyclical  $\xi_t$

# CONSUMPTION VS EXPENDITURE

- ▶ Aguiar & Hurst (2005):
  - ▶ Expenditure  $\neq$  consumption
  - ▶ Drop in  $C$  associated with expenditures associated with work (e.g. meals away from home)
- ▶ Kaplan & Menzio (2013): Unemployed pay less for same goods
- ▶ Use CEX for shares, but NIPA for aggregate?
  - ▶ Aggregated CEX under measures consumption
  - ▶ Less volatile and less pro-cyclical than NIPA
- ▶ What about service flows from durables?

# INCOMPLETE MARKETS/HETEROGENEITY

Why not calibrate model a la Krusell, Mukoyama & Sahin with benefit eligibility/take up?

BUT, Chang & Kim (*AER* 2007,2014):

- ▶ Incomplete markets, endogenous extensive labor supply, heterogeneity in productivity
- ▶ No benefits,  $b_t = 0$ , only  $\xi_t$  component
- ▶ Opportunity cost is pro-cyclical, but  $\hat{\epsilon}(\xi, p) \ll 1$   
(Consistent with Koenig, Manning & Petrolongo 2014)
- ▶ Individual reservation wages don't move much, but distribution of reservation wages.
- ▶ Volatility comes via marginal worker changing

## VALUE OF BENEFITS

Authors find  $b = 0.041$  marginal product of employment:

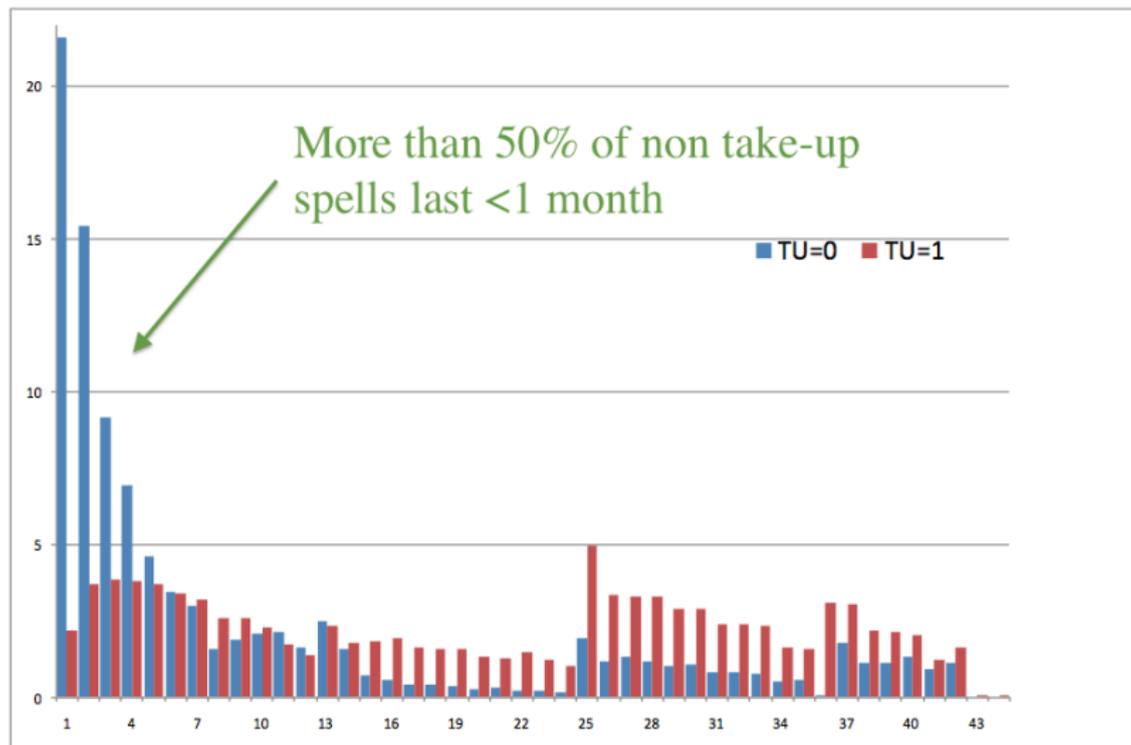
- ▶  $b_t \approx$  aggregate dollars spent on UI divided by number of unemployed divided by GDP per capita, net disutility of take-up

At micro level (Auray, Fuller & Lkhagvasure 2014):

- ▶ Fraction eligible  $\approx 60\%$ , Take up  $\approx 75\%$
- ▶ Receive 45% of previous earnings  $\Rightarrow$   
 $0.66 \times 0.75 \times 0.45 = 0.223$
- ▶  $b$  relative to individual productivity the relevant margin

Why convex cost of take-up? Stigma goes up in recessions?

# TAKE-UP RATES



Distribution of U duration by take-up, Blasco & Fontaine (2012)

## RECONCILE $b$ WITH THE LIT

- ▶ Huge literature looking at the effects of UI on unemployment (e.g. Meyer, Katz & Meyer, Card & Levine+ many more)
- ▶ Chetty (2013) Consensus: 10 week benefit extension leads to 1 week increase in unemployment duration
- ▶ Rothstein (2011) and Farber & Valletta (2013) conclusively showed not because of search effort
- ▶ Hagedorn, Karahan, Manovskii & Mitman (2013): 10 week extension leads to 1.1 week increase in duration

# PHILOSOPHY OF THE EXERCISE

Want to identify  $z_t$

- ▶ Use model A to identify  $z_t$
- ▶ Given  $z_t$  from model A, say model B is bad

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Why not the opposite?

- ▶ Use HM to identify  $z_t$
- ▶ Given  $z_t$  from HM, say CRK is bad