

# A New Measure of Labor Market Slack

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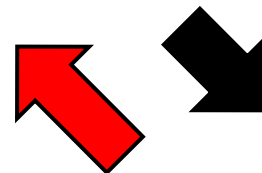
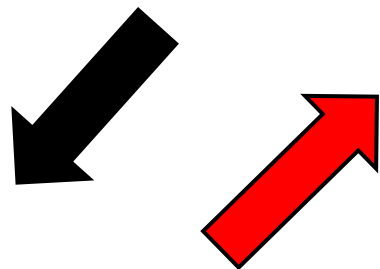
The U.S. Labor Market in the 21st Century  
FRB of New York  
November 22, 2024

Non-Employment  
(Slack)

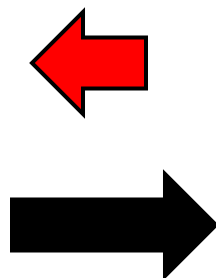


Employment  
(Output)

Non-Employment  
(Slack)



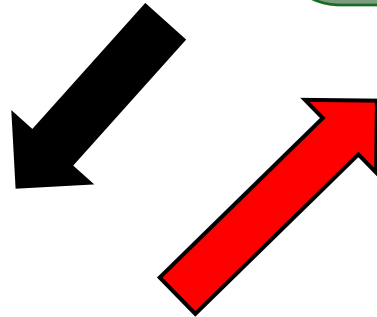
Employment,  
Bad Jobs  
(Output  $y$ )



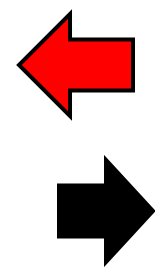
Employment,  
Good Jobs  
(Output  $Y > y$ )

# Recession

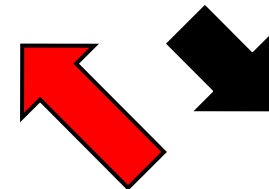
Non-Employment  
(Slack)



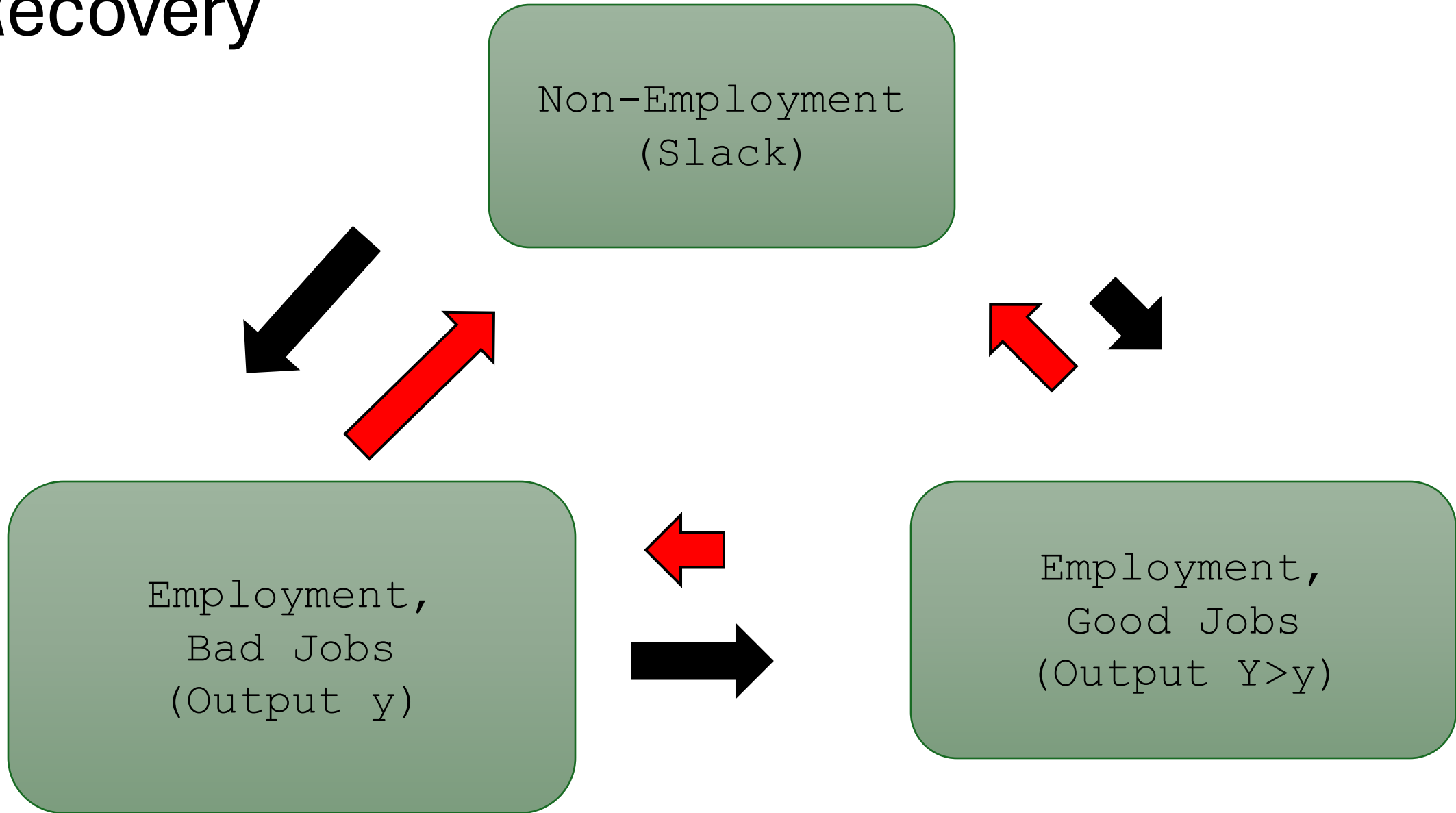
Employment,  
Bad Jobs  
(Output  $y$ )



Employment,  
Good Jobs  
(Output  $Y > y$ )

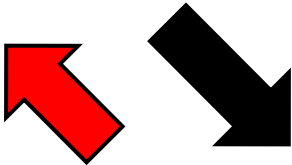
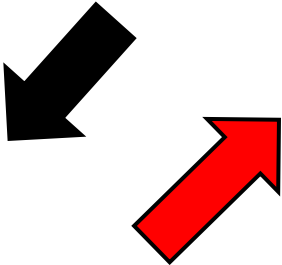


# Recovery

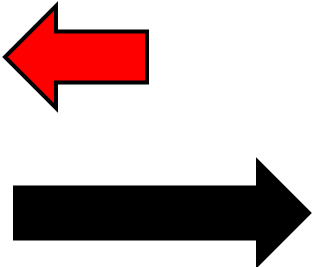


# Tight Market

Non-Employment  
(Slack)



Employment,  
Bad Jobs  
(Output  $y < Y$ ,  
Slack)



Employment,  
Good Jobs  
(Output  $Y > y$ )

## Measuring Slack in Employment in Real Time by Revealed Preferences

Unemployment-to-Employment (UE) and Employer-to-Employer (EE) transition probabilities are each the product of three terms

$$EE, UE = \underbrace{\text{search effort}}_{\text{labor supply}} \cdot \underbrace{\text{contact rate with open vacancies}}_{\text{labor demand}} \cdot \underbrace{\text{acceptance}}_{\text{labor supply}}$$

## The $AC = EE/UE$ Ratio

with random search, contact rate is the same

$$AC := \frac{EE}{UE} = \frac{\text{search effort by employed}}{\underbrace{\text{search effort by unempl}}_{\text{labor supply}}} \cdot \frac{\text{contact rate employed}}{\text{contact rate unempl}} \cdot \frac{\text{AC}_{\text{acceptance prob. employed}}}{\underbrace{\text{AC}_{\text{acceptance prob. unempl}}}_{\text{labor supply}}}$$

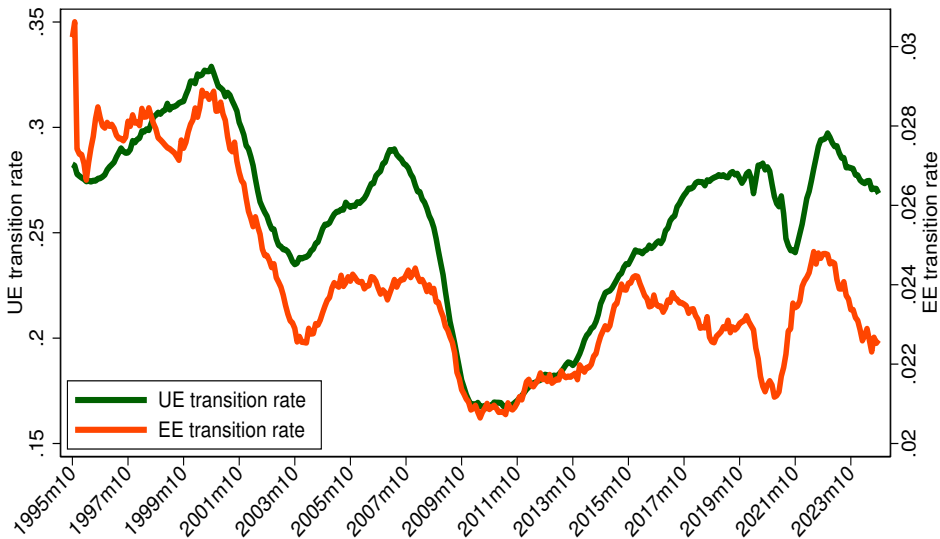
if employed are mismatched/unhappy, they search hard and accept many jobs, economy has large slack, low wage pressure, high  $EE/UE$  ratio



## The Cyclical Job Ladder

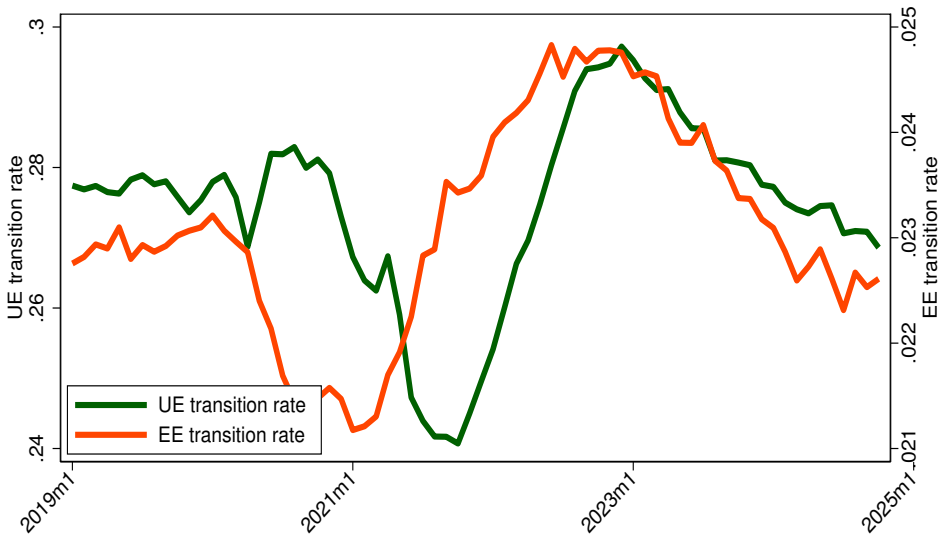
- **Theory:** Moscarini and Postel-Vinay (2008 NBER MA, Restud 2013, RED 2016, AR Survey 2018, RE 2024) and “The Job Ladder: Inflation vs. Reallocation”, with Fabien Postel-Vinay. July 2023. NBER WP 31466.
- **Measurement:** Fujita, Moscarini and Postel-Vinay (AEJ Macro 2024). EE series soon on FRED.
- **Empirics:** Moscarini and Postel-Vinay (2008 NBER MA, AER P&P 2010, AER 2012, JoLE 2016, AEA P&P 2017).

## UE and EE Probabilities, trailing 12-month MA



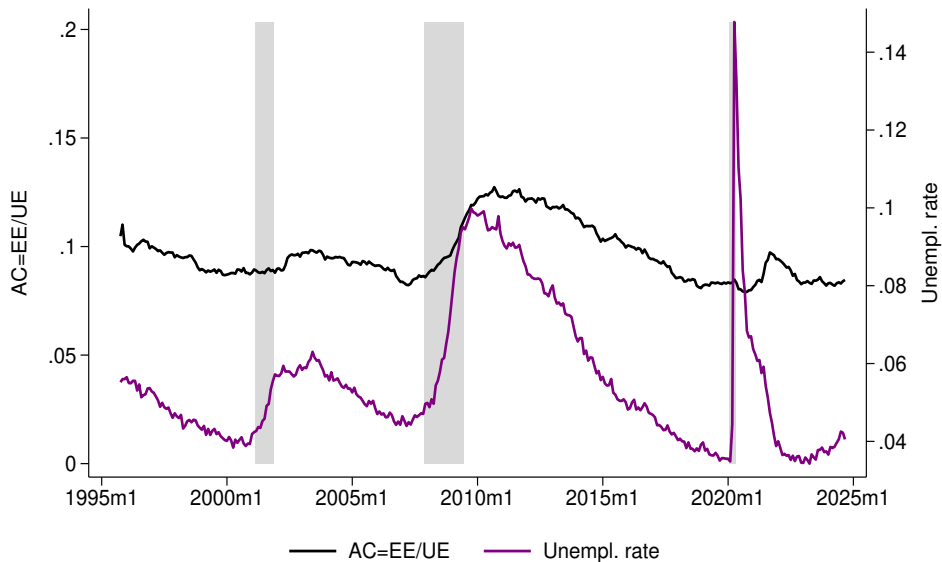
Monthly data, 12-month trailing moving average. Source: CPS and Fujita, Moscarini and Postel-Vinay (2024).

# Pandemic

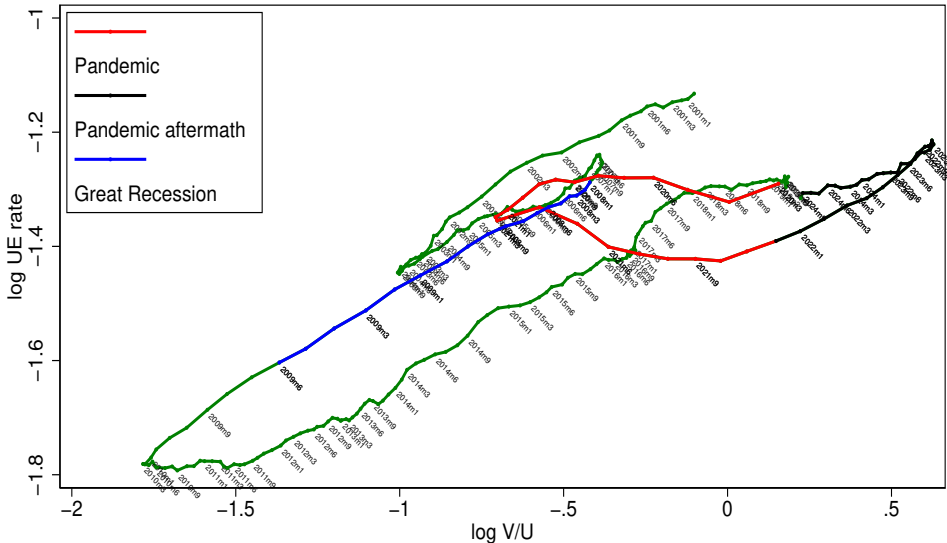


Monthly data, 12-month trailing moving average. Source: CPS and Fujita, Moscarini and Postel-Vinay (2024).

$AC=EE/UE$ , trailing 12-month MA, and unempl. rate

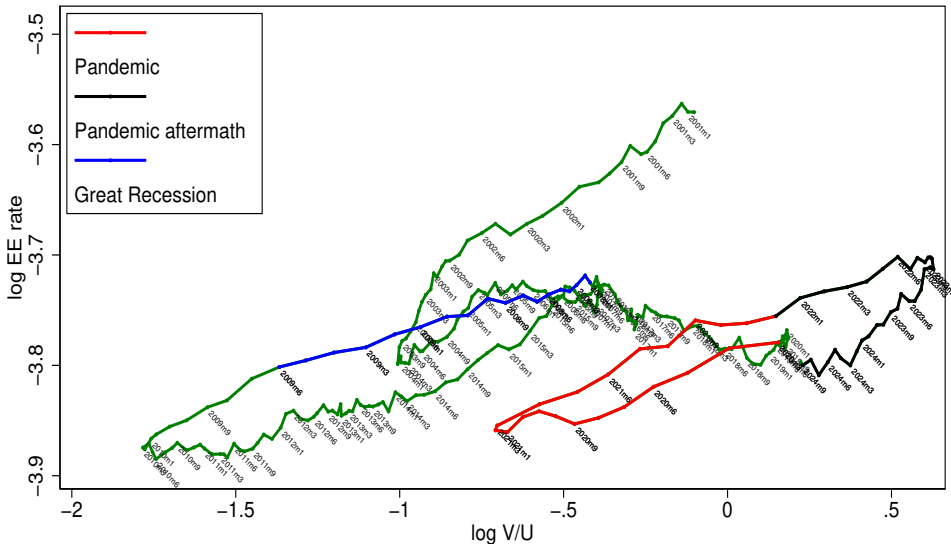


# log UE rate vs log(V/U), Trailing 12-Month MA



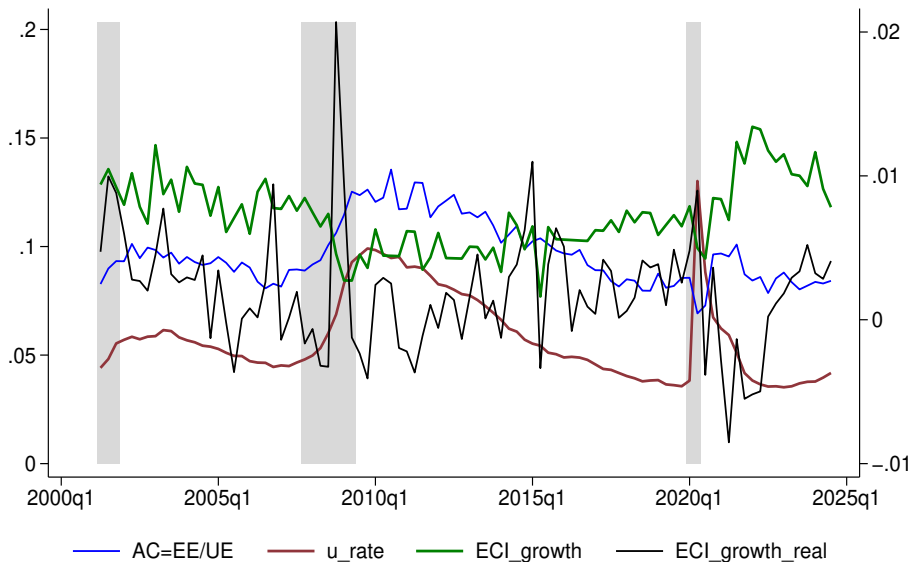
Source: CPS and Fujita, Moscarini and Postel-Vinay (2024)

# log EE rate vs log(V/U), Trailing 12-Month MA

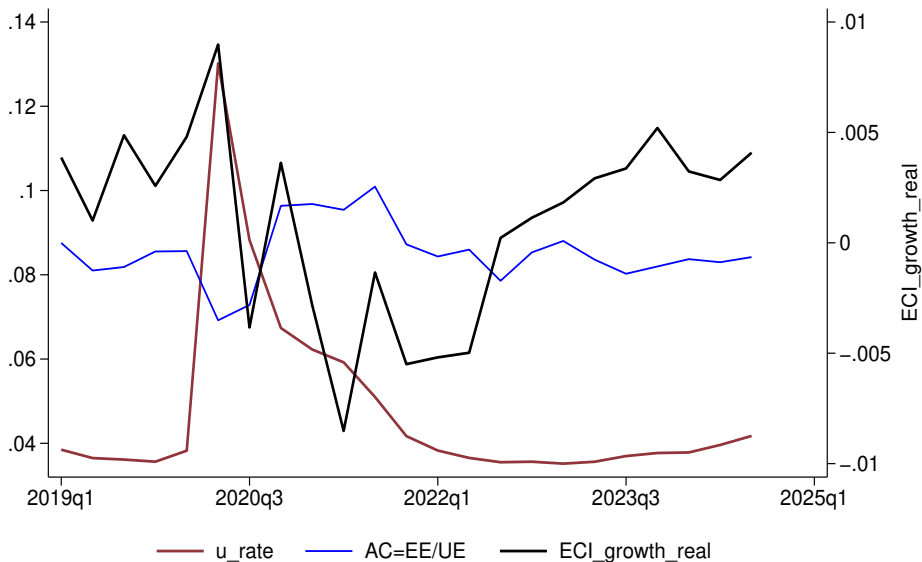


Source: CPS and Fujita, Moscarini and Postel-Vinay (2024)

# $AC=EE/UE$ , unemployment and ECI growth (Quarterly)



# Pandemic



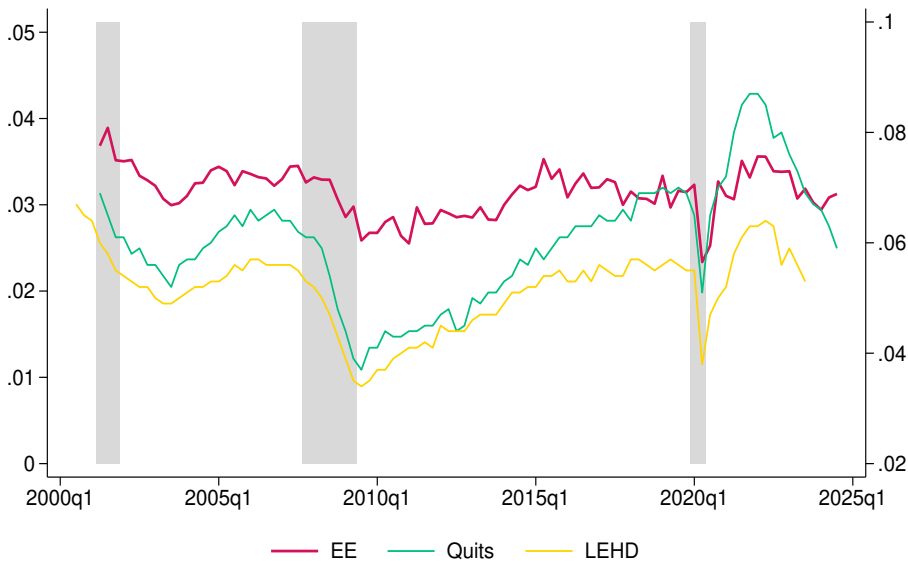


## Wage Phillips Curve: AC vs unemployment

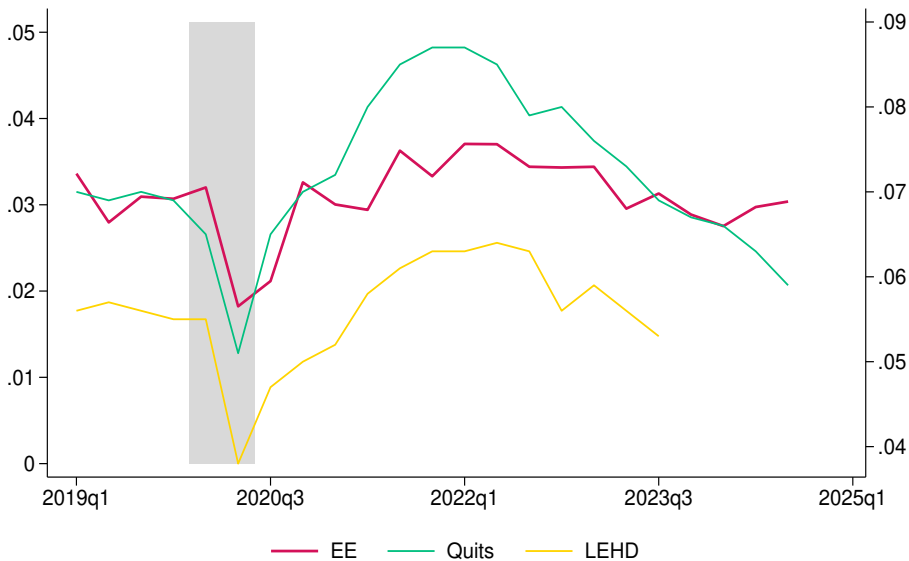
| Demographics $D \rightarrow$                    | OLS<br>(sex and education) |                 | IV (Lags&Shift-Share) |                 |                 |                 |
|---|----------------------------|-----------------|-----------------------|-----------------|-----------------|-----------------|
|   |                            |                 | (sex and education)   |                 | (sex and age)   |                 |
| $\sum_{j=0}^{20} \beta^j u_{S,t+j}$             | -.049<br>(.006)            | -.046<br>(.006) | -.032<br>(.020)       | -.089<br>(.032) | -.043<br>(.021) | -.097<br>(.032) |
| $\sum_{j=0}^{20} \beta^j AC_{S \times D,t+j}^N$ |                            | .033<br>(.014)  |                       | -.095<br>(.036) |                 | -.098<br>(.031) |
| N   | 20,280                     | 15,140          | 24,350                | 18,970          | 38,960          | 30,271          |

- Dep. var.: log change in nominal earnings in Non-tradable industries by State  $\times$  Demographics.
- Weighted by employment.
- Standard errors clustered at state level.
- Data QWI-LEHD.

## CPS EE, JOLTS Quits and LEHD J2J (Quarterly)



# Pandemic



# Net Employment Reallocation Across States and 6-digit Industries, QCEW

