Comments on

"Insider-Outsider Labor Markets, Hysteresis and Monetary Policy" by Jordi Galí

Andrew Levin
Dartmouth College
March 2016

General Comments

- **Highly relevant topic**
- **Elegant and lucid analysis**
- **Significant implications for the design of central bank mandates and policy strategies**

The Job of the Discussant

- Praise the author's seminal work
- Quibble with some technical details
- Put empirical results in international context
- Shameless promotion of discussant's own work

Stylized NK Model

Labor Demand Curve: $\omega_t^d = a_t - \alpha n_t^d$

Price Markup Gap: $\mu_t^p = a_t - \alpha n_t - \omega_t$

→ *Aggregate price inflation responds to price markup gap*

Labor Supply Curve: $\omega_t^s = c_t + \varphi n_t^s$

Wage Markup Gap: $\mu_t^w = a_t + (1 - \alpha + \varphi) n_t - \omega_t$

→ *Aggregate wage inflation responds to wage markup gap*

Alternative Forms of Labor Market Inertia

- **Real wage rigidity (Blanchard & Gali 2007)**

$$\omega_t(j) = \gamma\omega_{t-1}(j) + (1-\gamma)\omega_t^s$$

- **Employment targets (this paper)**

$$n_t^*(j) = \gamma n_{t-1}(j) + (1-\gamma)n_t^s$$

Elements of Myopia in Wage Setting

- **Time-Consistent Targeting**

$$(1-\beta\theta_{\omega})\sum_{k=0}^{\infty}(\beta\theta_{\omega})^{k}E_{t}\{n_{t+k}(j)-n_{t+k}^{*}(j)\}=0$$

- **Time-Inconsistent Targeting**

$$(1-\beta\theta_{\omega})\sum_{k=0}^{\infty}(\beta\theta_{\omega})^{k}E_{t}\{n_{t+k}(j)\}=n_{t}^{*}(j)$$

The Monetary Policy Reaction Function

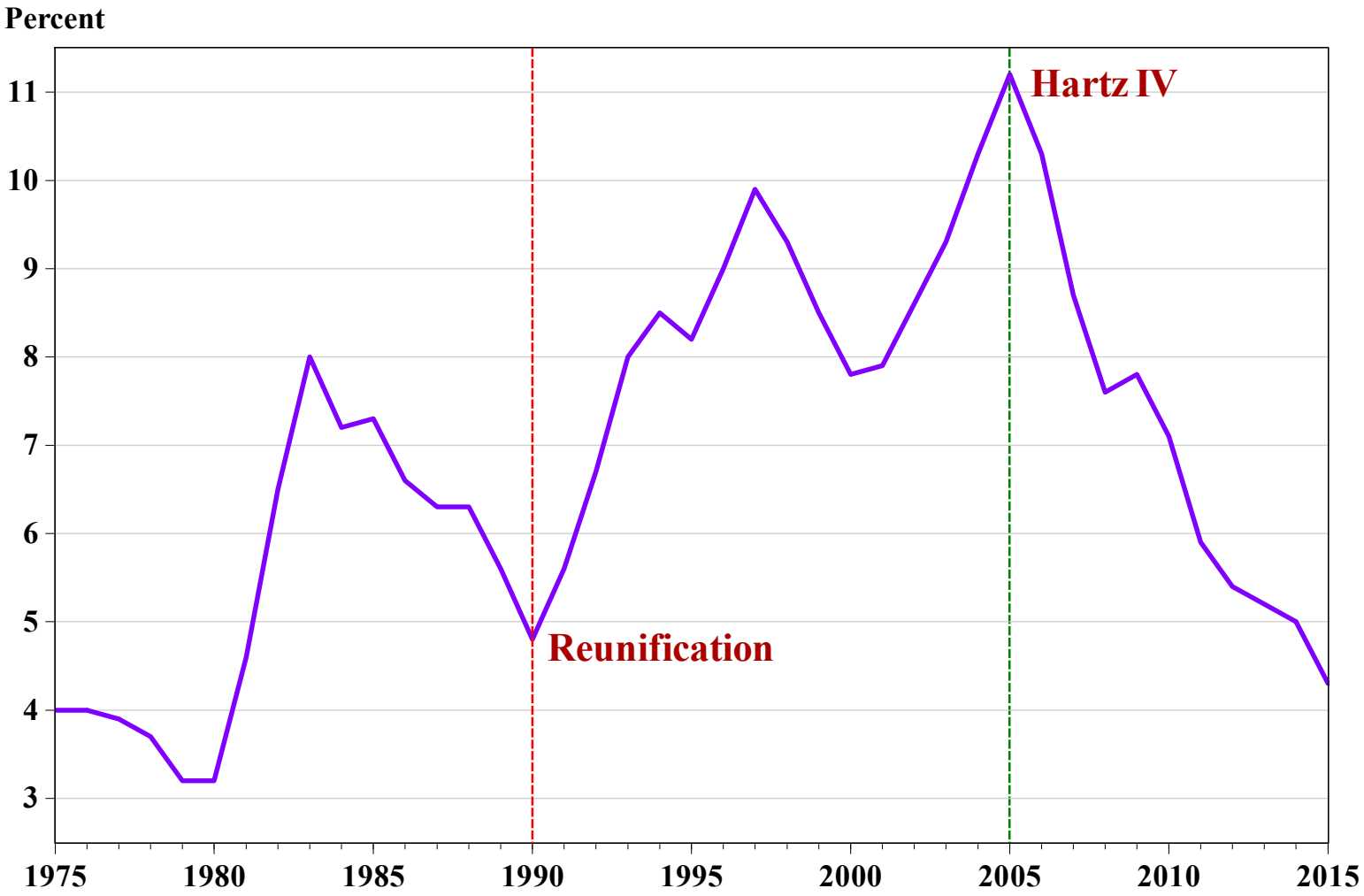
- **Respond to Output Growth**

$$i_t = \phi_i\, i_{t-1} + \phi_\pi\, \pi_t + \phi_y\, \Delta y_t$$

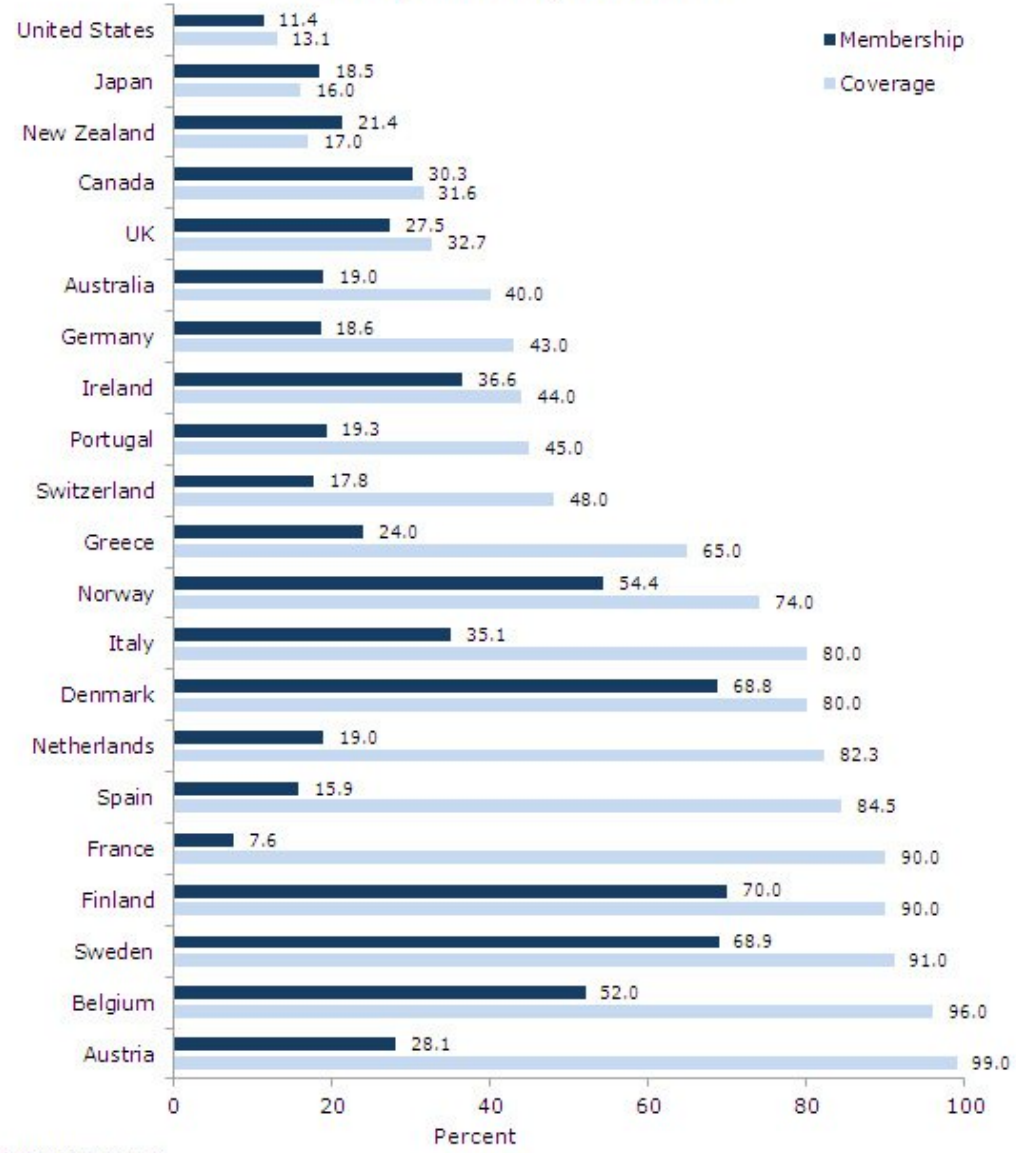
- **Respond to Unemployment Gap**

$$i_t = \phi_i\, i_{t-1} + \phi_\pi\, \pi_t + \phi_u\, u_t$$

German Unemployment, 1975-2015

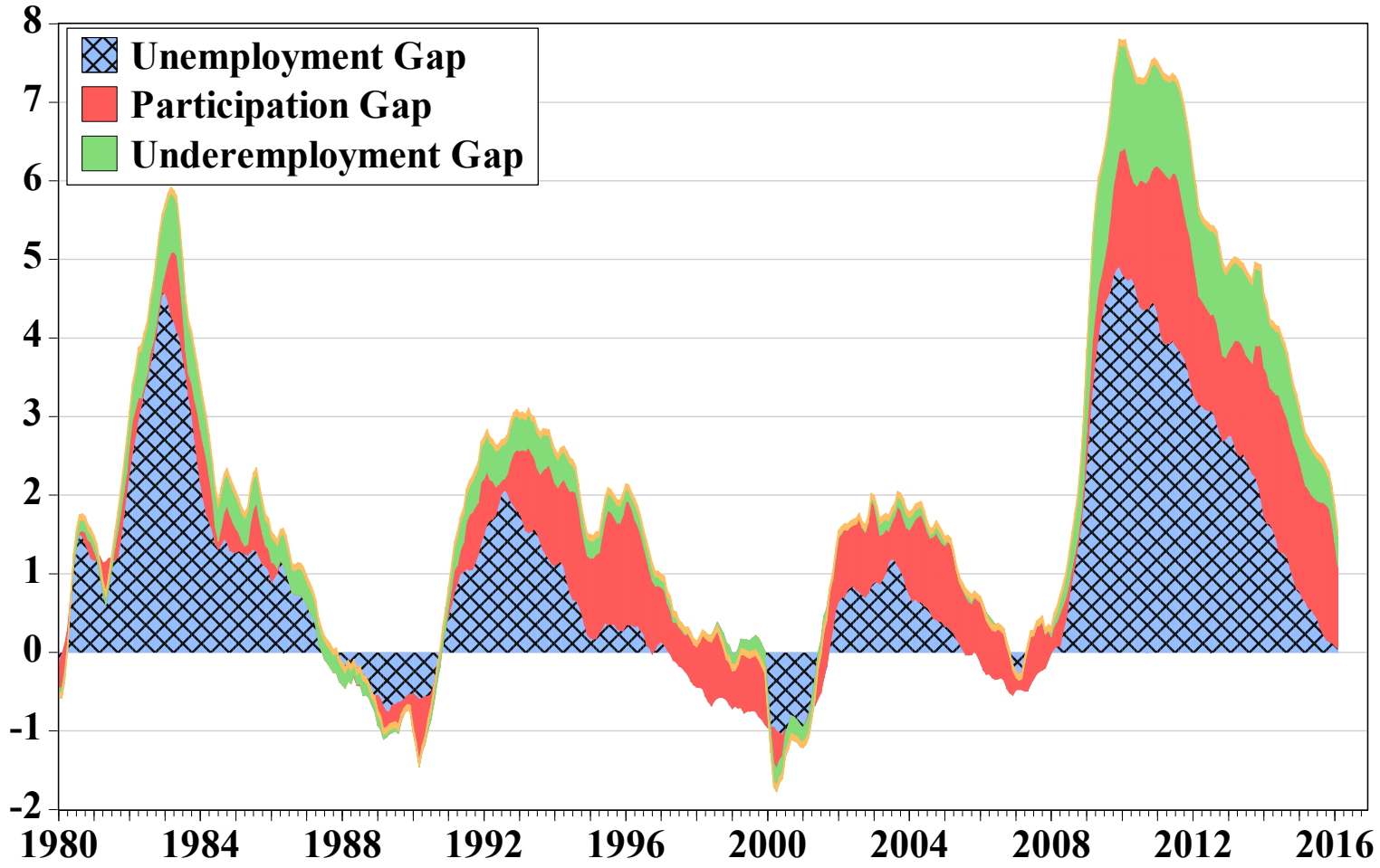


Union Membership and Union Coverage Rates in 21 Wealthy Countries, 2007-2010



http://cepr.net
Source: ICTWSS Database, version 3.0, May 2011. See full text for source.

The Evolution of the U.S. Employment Gap



Source: Levin (JEDC 2014)

Erceg & Levin (JMCB 2014)

- **The employment gap is the sum of the participation gap and the unemployment gap:**

$$\tilde{n} = \tilde{l}_f + \tilde{u}_r$$

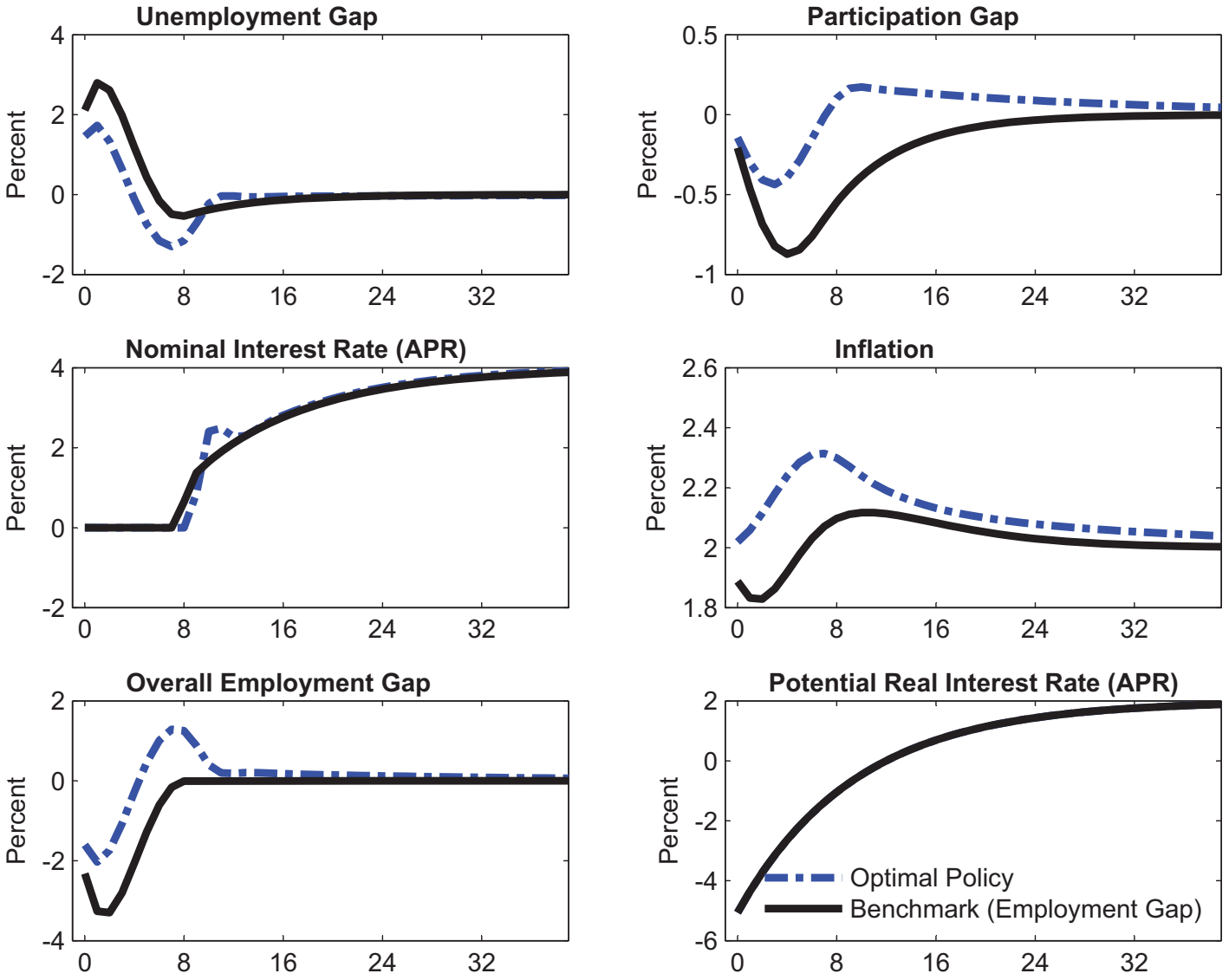
- **The participation gap adjusts slowly to the unemployment rate:**

$$\tilde{l}_{ft} = 0.97\ \tilde{l}_{ft-1} + 0.06\ \tilde{u}_{r_t}$$

- **The unemployment gap and the participation gap have distinct effects on inflation:**

$$\pi_t = \beta\pi_{t+1} + \kappa_p\left(\psi_e\,\tilde{u}_{r_t} + \psi_l\tilde{l}_{ft}\right)$$

Figure 10: Optimal Policy under Commitment



Evidence from U.S. Panel Data, 1990-2012

Contemporaneous Explanatory Variables

$$\omega_{ij,t} = 0.66\,\omega_{ij,t-1} - 0.006\,unemp_{ij,t} - 0.091\,nonpart_{ij,t} - 0.021\,underemp_{ij,t}$$

(320.4) *(10.3)* *(40.8)* *(50.9)*

Lagged Explanatory Variables

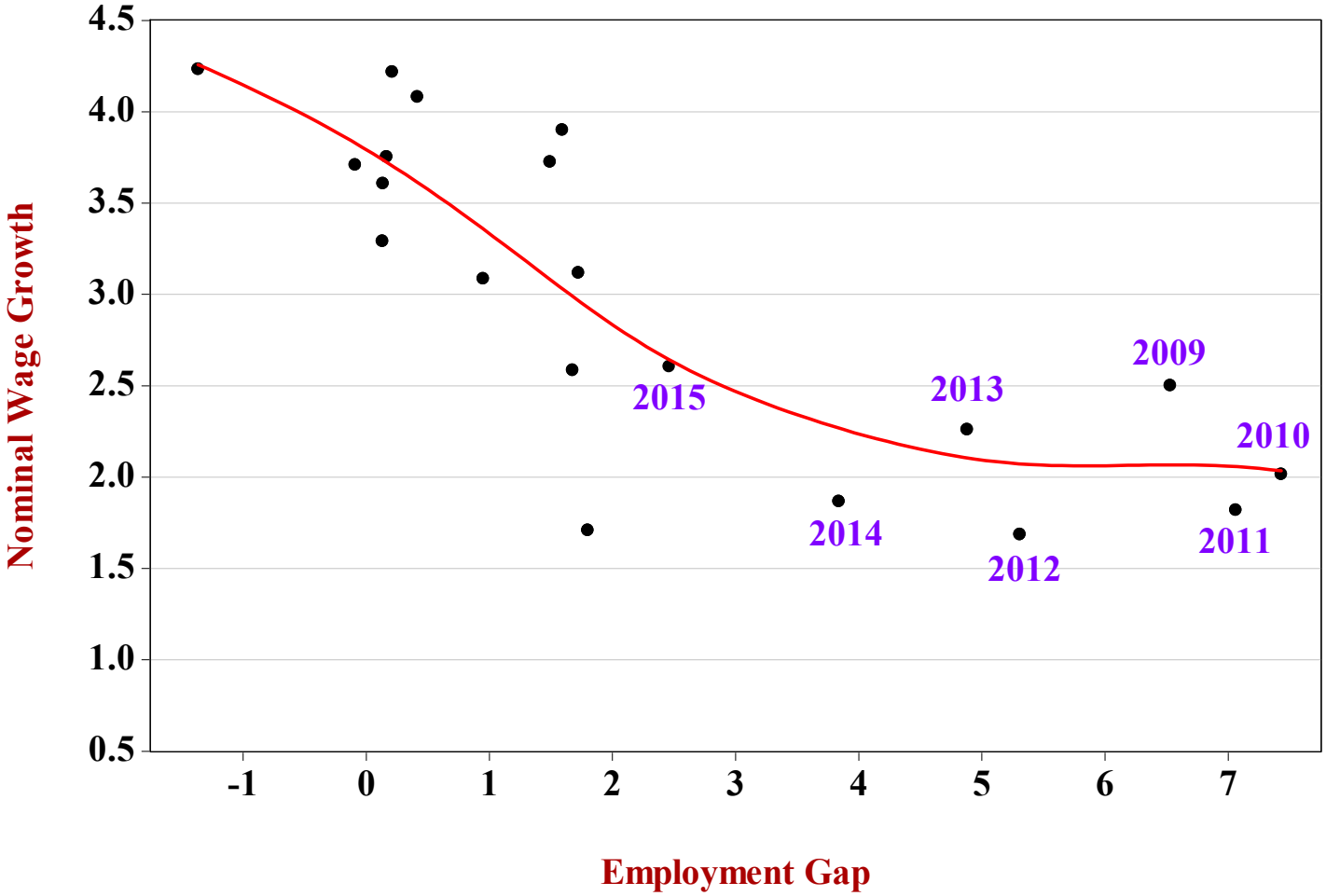
$$\omega_{ij,t} = 0.62\,\omega_{ij,t-1} - 0.018\,unemp_{ij,t} - 0.093\,nonpart_{ij,t} - 0.020\,underemp_{ij,t}$$

(290.9) *(30.6)* *(41.0)* *(50.6)*

Note: Each regression uses 1,173 observations. All variables are given in natural logarithms. Each equation includes state dummies, time dummies, and 19 demographic controls. The t-statistics are shown in parentheses.

Source: Blanchflower & Levin (NBER WP, 2015)

The Wage Curve



Source: Blanchflower & Levin (NBER WP, 2015)