**The wage–employment nexus: A tale of persistence**

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**An elusive wage Phillips curve (I)**

- **Missing wage growth puzzle** in the euro area: fading correlation employment/wage growth after the Global Financial Crisis
- At the same time also the correlation employment/labour productivity (output per worker) turned negative

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**An elusive wage Phillips curve (II)**

- Estimate a Bayesian VAR over the period 1995:Q1–2008:Q2
- Y1 = [GDPt; nt; wt]
- Forecast wages w... conditional on actual employment nt
- Overestimation of w... and break in labour productivity mpnt
- Evidence is robust to (i) estimating BVAR over other samples; (ii) accounting for underemployment (i.e. higher slack)

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**Labour productivity and wages**

- Define compensation per employee as: Ψt = Wt + ξt
- Log-linearizing the model around the steady state, we obtain:
  \[ \hat{\xi} = A \cdot \hat{mpn}_t + B \cdot \hat{n}_t \]
  where A and B are positive convolutions of deep parameters.
- Hence the reaction of wages to a change in employment is:
  \[ \frac{\partial \hat{\xi}}{\partial n_t} = A \cdot \frac{\partial \hat{mpn}_t}{\partial n_t} + B \]
  - positive if labour productivity is procyclical \((\frac{\partial \hat{mpn}_t}{\partial n_t} > 0)\) → labour hoarding: more variation in the intensive margin
  - negative if labour productivity is countercyclical \((\frac{\partial \hat{mpn}_t}{\partial n_t} < 0)\) → more variation in the extensive margin

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**IRF of Labour Productivity**

- **Demand shocks and the cyclical phase**
- Focus on the impact of a demand shock (shock to the discount factor):
  \[ \log \xi_t = \rho \log \xi_{t-1} + \varepsilon_t \]
  A positive demand shock increases output, labour and inflation.
  - How much firms adjust the extensive vs the intensive margin of labour?
  - Crucial is the persistence of the shock (\(\rho\))
  - Intuition: the more persistent is the cyclical phase the more firms are willing to pay the cost of adjusting the extensive margin. Hence:
    - Low persistence: firms hoard labour → labour prod. is procyclical → positive impact on wages
    - High persistence: firms adjust more the extensive margin → labour prod. is countercyclical → null/negative impact on wages

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**Concluding Remarks**

- **Novel explanation of the wageless recovery in the EA**
  - Persistent demand shocks ⇒ change in the conditional correlation between labour productivity and employment after the GFC ⇒ smaller reaction of wages