Wages and Prices in the Euro Area: Exploring the Nexus

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Introduction

- Renewed attention to the empirical nexus between wages and prices after the Global Financial Crisis
- Research: assessing the linkages between wages and prices especially with respect to the puzzling behaviour of inflation conditional to economic activity
- Policy: during the missing inflation, wage dynamics constantly monitored, patiently waiting for its pass-through (PT) to core inflation
- Weakening in the impulse from wages to prices ⇒ in the Euro Area (EA) unconditional correlation tends to vanish after 2011 (0.25 vs. 0.55 in 1995-2011).

Figure 1: The vanishing link between wage growth and core inflation in the EA.

This paper

- Studies conditional wages/prices nexus in the EA
- Answers three research questions
  - How does wage dynamics transmit to measures of underlying inflation?
  - Is the PT from wages to prices shock-dependent?
  - What role for monetary policy and financial shocks, two drivers rather neglected so far?
- Informs policymakers on wage-prices spirals

Main findings

- The conditional PT from wages to core consumer prices is lower than 1 – although close to 1 for wage bargaining shocks
- During missing inflation wage growth mainly driven by labour market-specific shocks and aggregate supply shocks. Negligible contribution of aggregate demand shocks ⇒ not strong enough to raise core inflation
- Financial shocks act as disturbances of supply nature ⇒ move wages and consumer prices in opposite directions
- Accordingly, this feature translates into firms' counter-cyclical mark-ups, consistently with theoretical models in which firms face financial frictions and nominal rigidities.
- Overall: important implications for building theoretical models that address the relation between labour, financial and macroeconomic variables

Empirical Framework

- Bayesian VAR model

\[ y_t' = \sum_{i=1}^{p} y_t'A_i + c + \varepsilon_t, \quad \varepsilon_t \sim (0, \Sigma) \] (1)

- Quarterly data over sample 1999-2018
- Identification of 5 shocks (baseline model) ⇒ Aggregate Demand, Aggregate Supply, Labour Supply, Wage Mark-Up, Monetary Policy

Table 1: Identifying assumptions

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Notes: +/− denote sign restrictions on impact (|0.25| vs. |0.55|).

Adding Financial Shocks

- Extended model ⇒ Add financial shocks
- Identification ↓

- No contemporaneous impact on labour variables (0 on \( Y_t/H_t, U_t \))

- Figure 4 shows positive correlation between financial stress and the estimated contributions of AS shocks from the baseline model
- Supply-side mechanism related to financial developments at work in the EA

Figure 4: Financial stress and AS contributions.

Conditional W-to-P Pass-Through

- Ratio between cumulated IRFs of W and IRFs of P conditional to each identified shock \( s = 1, ..., 5 \)

\[ \text{CWPPT}_s = \sum_{h=1}^{H} \frac{IRF(W_t | P_t^h)}{IRF(P_t | W_t^0)}, \quad H = 12 \] (2)

- Largely incomplete PT in the short-run and quite similar across same-nature shocks
- Largest PT associated with AD and WMU shocks (0.6, 0.8)
- MP and LS shocks lead to lower values (0.4, 0.6)
- AS shocks move W and P in opposite directions (-0.5, -0.1)

Figure 2: CWPPT in the baseline model.

Drivers of wages and prices

- Acceleration in wage growth mainly reflected labour market shocks and AS shocks
- Wage pressures stemming from labour-specific shocks effectively transmitted to core inflation but counter-balanced by the negative contribution of AS shocks. Small contribution of AD shocks

Figure 3: Historical Decomposition.

Figure 5: CWPPT in the Extended model.

Financial shocks and inflation

- During missing inflation, favourable financial shocks kept core inflation lower by about 0.2%

Figure 7: Countercfactuals: Extended model.