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EUROPEAN CENTRAL BANK

EUROSYSTEM



Structural labour market and wage formation challenges in the euro area

SUERF annual conference

Session: Monetary policy and structural changes in the labour market

22-23 May 2025

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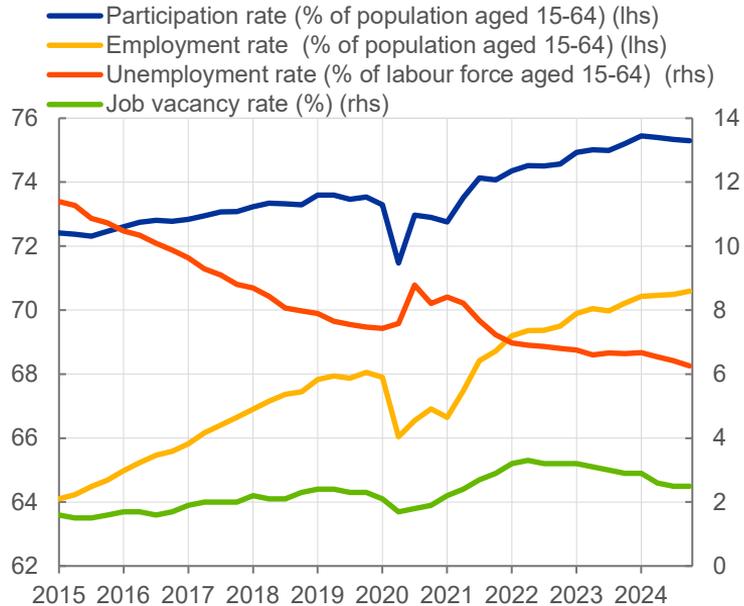
1 Developments in recent years

2 Challenges ahead

Employment, productivity and GDP growth

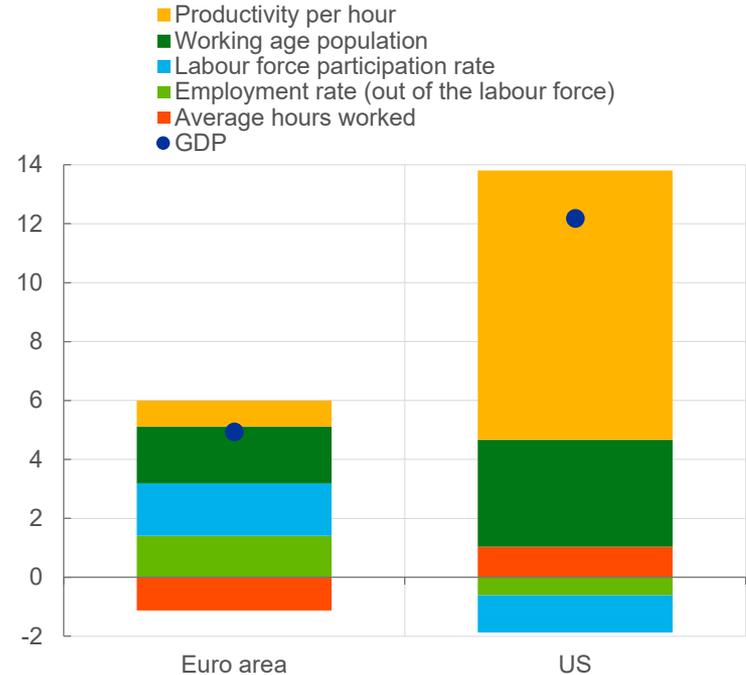
Labour market indicators

(percentages)



Labour market drivers of real GDP growth

(%-change since 2019Q4)



Source: Eurostat.

Notes: The job vacancy rate (JVR) is calculated as the ratio of job vacancies to the total of occupied posts plus job vacancies. The latest observations are for the fourth quarter of 2024.

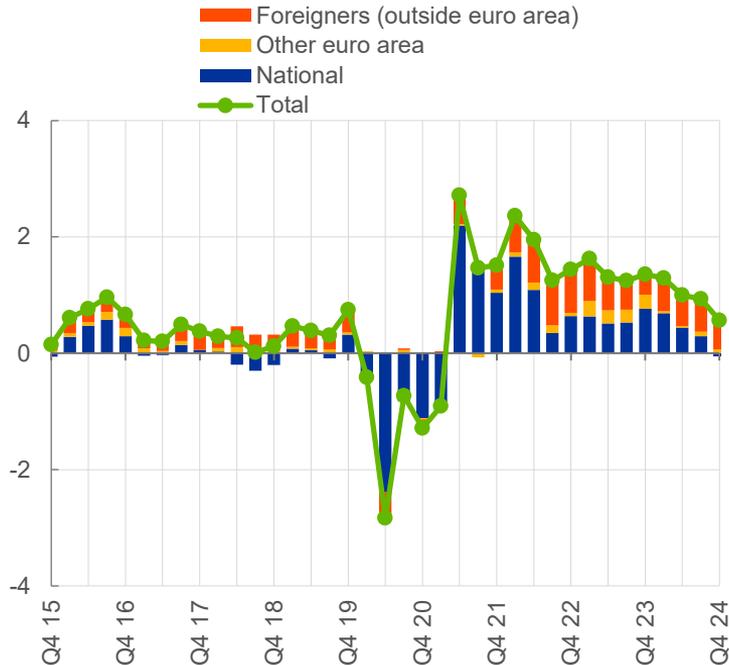
Sources: Eurostat, Bureau of Economic Analysis.

Note: The latest observations are for the fourth quarter of 2024.

Foreign workers – a lever for employment and growth

Labour force growth by nationality

(year-on-year percentage change; percentage point contributions)

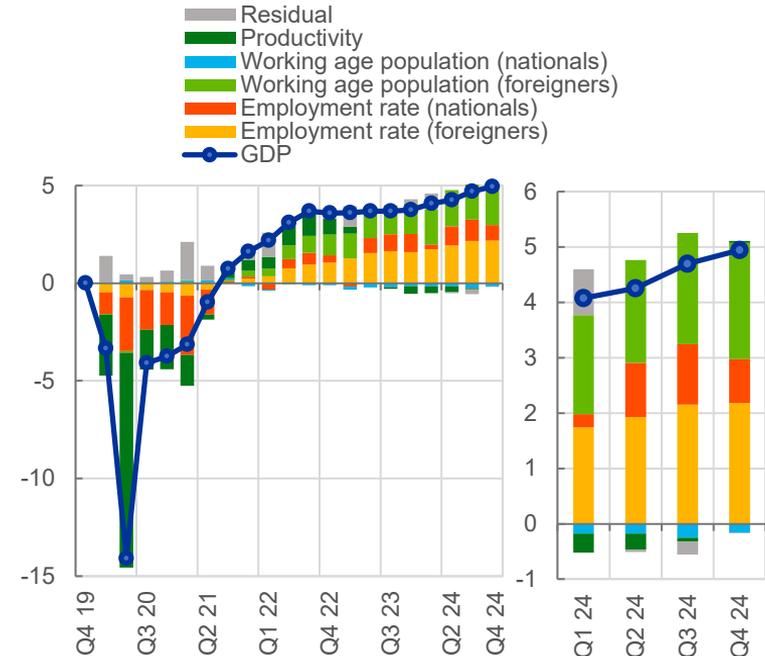


Source: EU LFS.

Note: The latest observation is for the fourth quarter of 2024.

Contribution of foreign workers to GDP growth

(percentage change since the fourth quarter of 2019 and percentage point contributions)



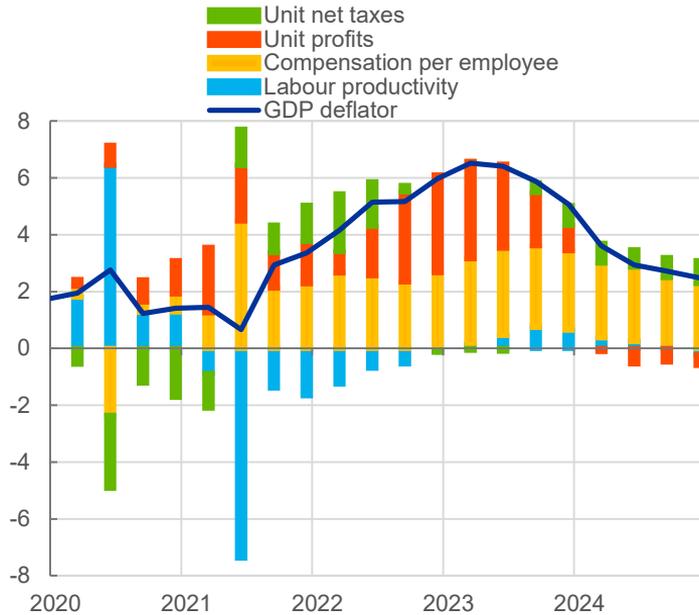
Sources: National accounts data and EU LFS.

Notes: The residual contribution is mostly due to differences in employment growth between LFS and national accounts data. A small part is also due to approximations in calculating the contributions by nationality. The latest observation is for the fourth quarter of 2024.

Post-pandemic wage growth: Catching up with inflation

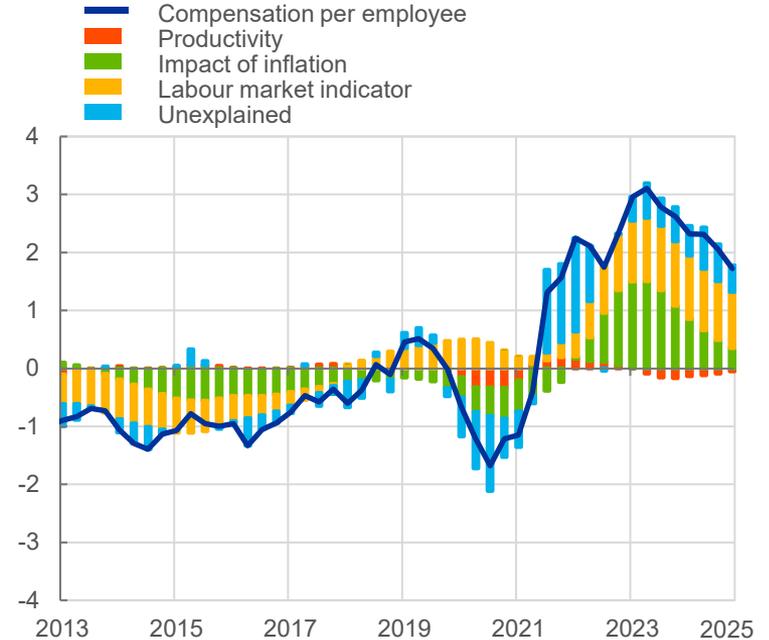
Decomposition of the GDP deflator

(annual percentage change and percentage point contributions)



Wage Phillips curve decomposition of compensation per employee growth

(annual percentage changes; pp contributions)



Sources: Eurostat, ECB and ECB calculations
Notes: The latest observations are for Q4 2024.

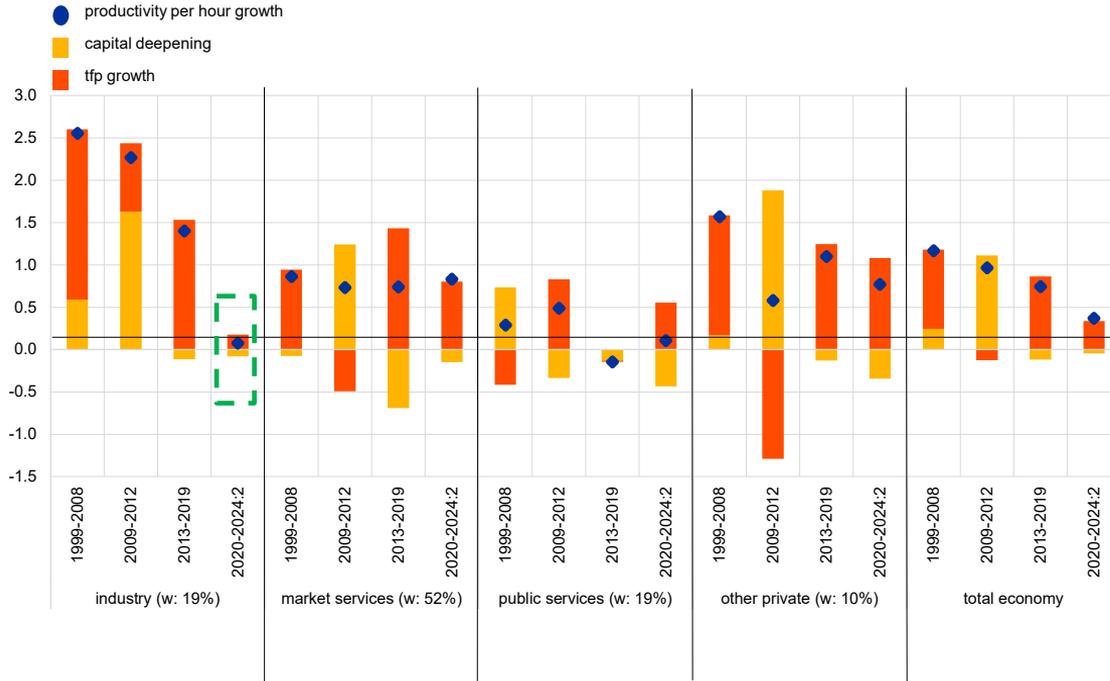
Sources: Eurostat, European Commission, ECB and ECB staff calculations.
Notes: The chart shows an average over various specifications, for de-meaned compensation per employee growth. Compensation per employee and productivity were interpolated over the first and second quarters of 2020 in level.

1 Developments in recent years

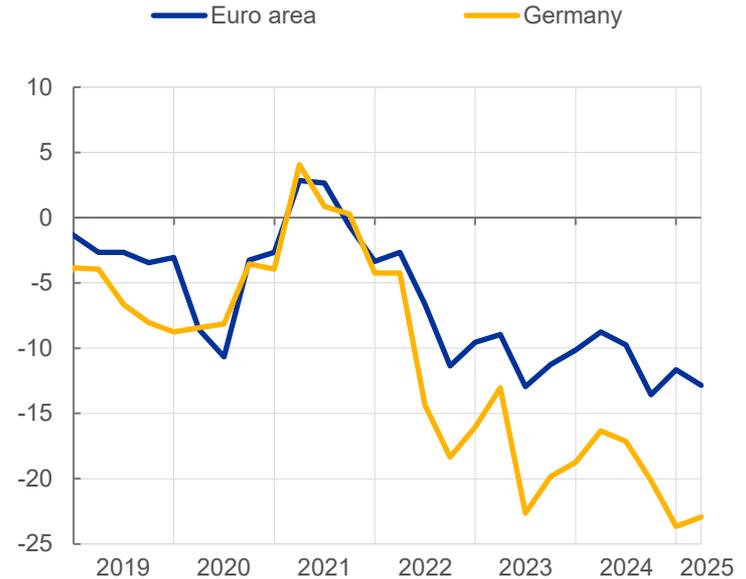
2 Challenges ahead

Weak productivity in manufacturing and competitiveness challenges

A decomposition of productivity growth across sectors (annual percentage change)



Competitiveness of industrial firms in sales markets outside EU (percentage-balances, in deviations from pre-pandemic average)

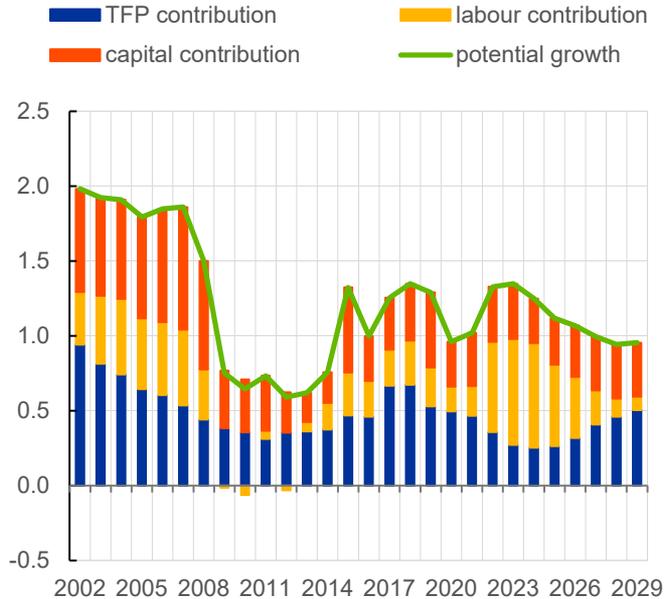


Source: Quarterly National Accounts.
Note: "w" refers to the weight of the sector in total value added.

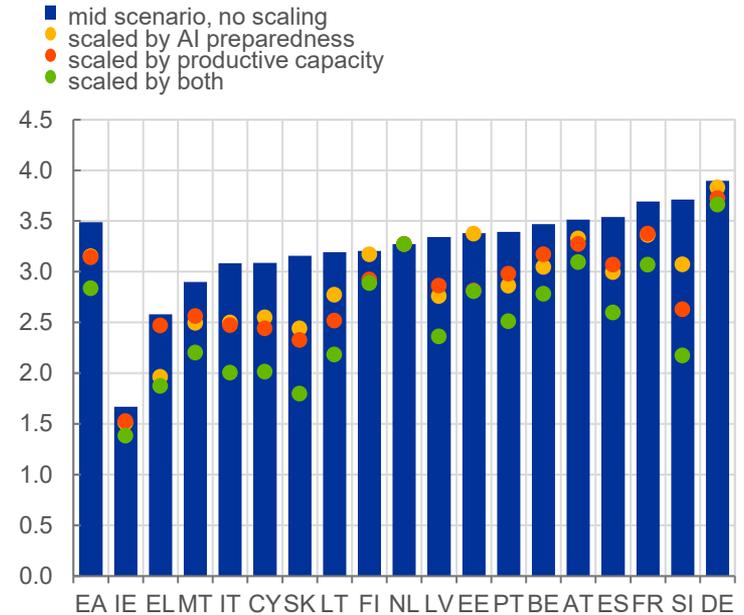
Sources: DG-ECFIN and ECB calculations.
Notes: Based on the question "How did the competitiveness position change over the last three months compared to the previous three months?", if exports took place. The latest observations are for the second quarter of 2025.

Ageing depressing productivity growth – while innovation could spur it

Potential growth in the euro area (annual percentage change, percentage points)



Estimated productivity gains from AI – cumulated over the next 10 years (percentage points)



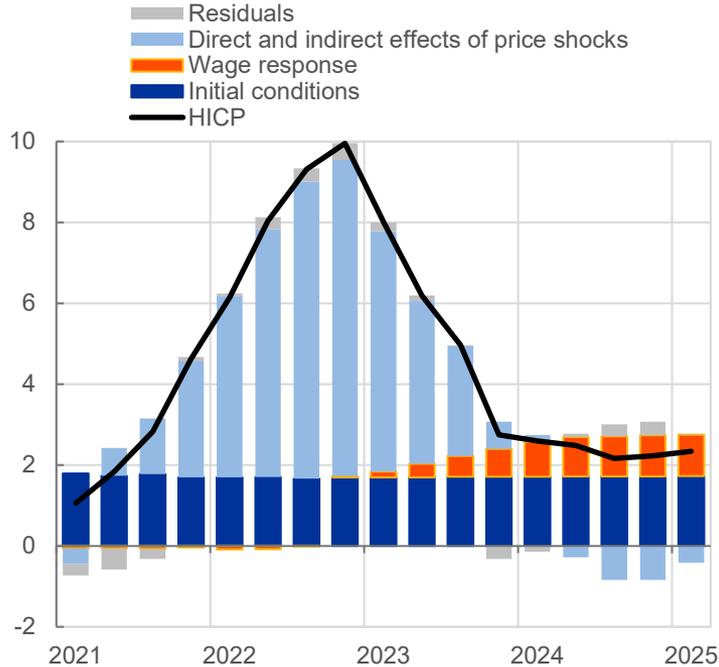
Sources: European Commission, EPC Working Group on Potential Output.
Note: TFP refers to Total Factor Productivity.

Source: THE ECB BLOG AI can boost productivity – if firms use it 28 March 2025.
<https://www.ecb.europa.eu/press/blog/date/2025/html/ecb.blog20250328-60c0a587f7.en.html>
Notes: The potential gains depend on the AI adoption by firms. Yellow dots: scaled with the IMF's preparedness index, which measures how prepared countries are for AI in terms e.g., of digital infrastructure, regulation and labour force. Red dots: scaled by UN productive capacities index which includes 42 economic characteristics and their role for productivity, such as transport, education or quality of institutions. Green dots: scaled by both indices together.

Second-round effects more relevant amid large supply shocks

Direct and second-round effects of shocks

(annual percentage changes and percentage point contributions)

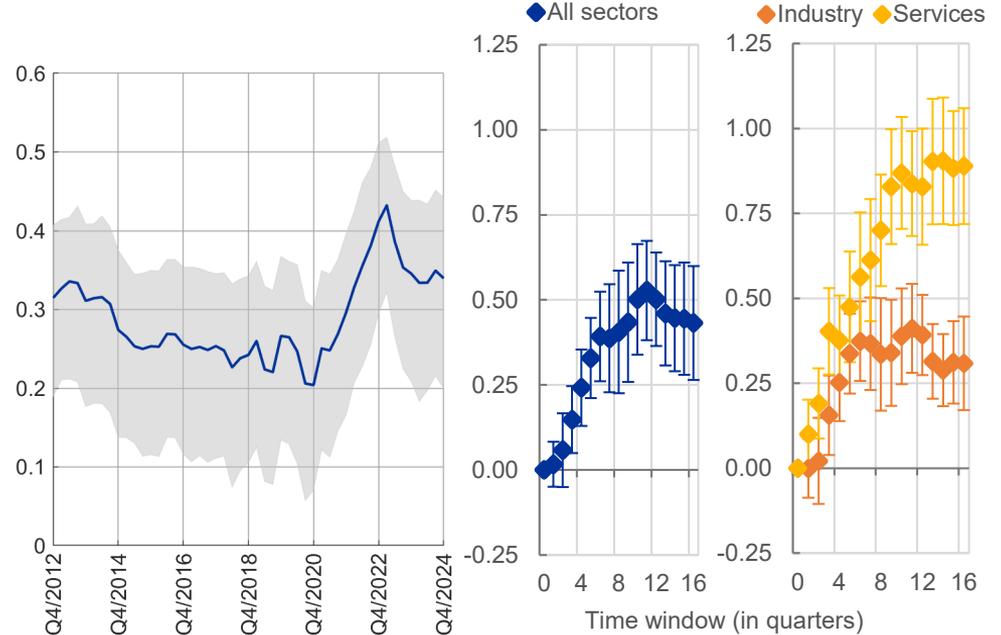


Source: ECB calculations based on Arce, O., Ciccarelli, M., Kornprobst, A. and Montes-Galdón, C. (2024), “[What caused the euro area post-pandemic inflation?](#)”, Occasional Paper Series, No 343, ECB.

Note: The contributions stemming from the “wage response” are obtained by taking the difference between the in-sample dynamic simulation and a counterfactual dynamic simulation in which wages did not respond to shocks since the first quarter of 2020.

Pass-through estimates

(LHS: percentage points. RHS: cumulated response of producer prices following a 1% cumulated increase in hourly wage growth for different time windows)

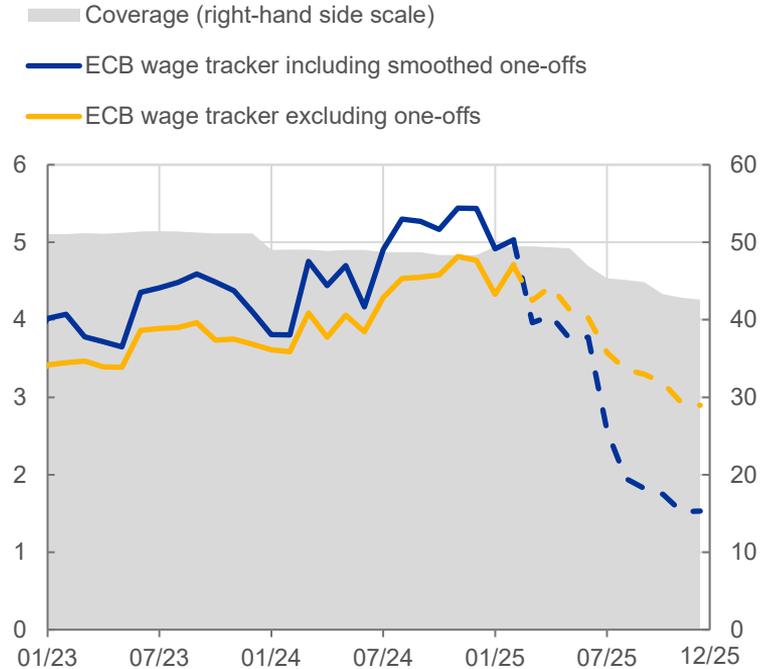


Source: ECB calculations. Notes: The figure shows the long-run pass-through from labour costs (ULC) to price inflation (GDP deflator), measured as the cumulated impulse responses over the first two years following a 1% increase in ULC. Estimates are obtained using a 30-year rolling window, starting in Q4 2012 and ending in Q4 2024.

Source: Ampudia, et al., 2024.

Wage trackers: a leap forward in monitoring wage setting in the euro area

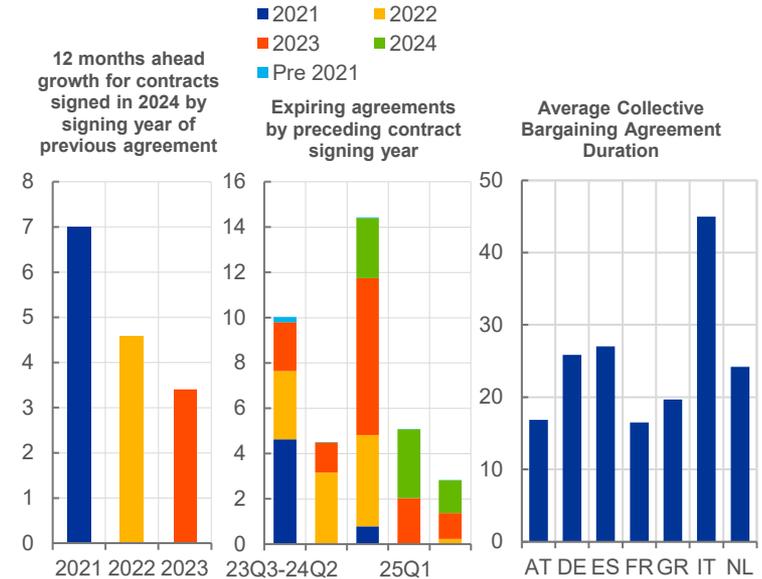
Forward-looking wage tracker for the euro area (percentages)



Sources: Wage tracker calculated based on micro data on wage agreements provided by Deutsche Bundesbank, Banco de España, the Dutch employer association (AWVN), Osterreichische Nationalbank, Bank of Greece, Banca d'Italia, and Banque de France; Eurostat; Projections database.
Notes: the dashed lines represent the forward looking wage tracker for April 2025. The latest observations are for December 2025.

Latest and expiring agreements by signing dates

(lhs: annual percentage changes and percentages; rhs: millions of workers)



Sources: Calculated based on micro data on wage agreements provided by Deutsche Bundesbank, Banco de España, the Dutch employer association (AWVN), Osterreichische Nationalbank, Bank of Greece, Banca d'Italia, and Banque de France.
Notes: Euro area aggregate based on DE, FR, IT, ES, NL, AT, GR, as of August 2024.
lhs: 12 months ahead structural wage growth by the year of signing of the preceding agreement.

