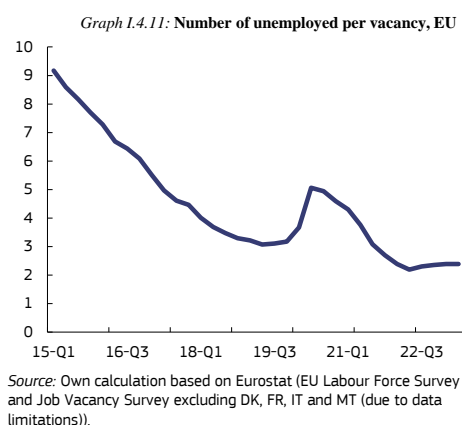
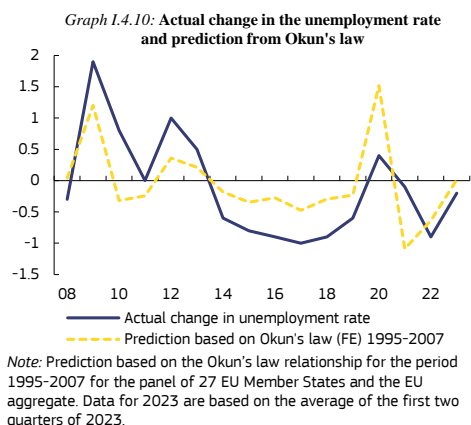


4.2. PERSISTENT LABOUR MARKET TIGHTNESS DURING A SLOWDOWN: A REAPPRAISAL OF DRIVERS

This section explores potential explanations for the persistent labour market tightness despite the ongoing economic slowdown in the EU. While the surge in labour shortages observed in the aftermath of the pandemic is easily interpreted as the result of the sudden reopening of the economy, the persistency of low unemployment and high rates of vacancies and labour shortages calls for a reappraisal of the drivers of labour market tightness in the EU.⁽⁴²⁾ The analysis first compares actual changes in unemployment to those predicted on the basis of the historical relationship with economic growth. Unemployment dynamics are then decomposed into inflows and outflows and put in relation with economic growth. The analysis focuses on plausible factors driving labour market tightness: growing mismatch, reduced labour supply or increased labour demand. It concludes that the tightening of labour markets is mainly driven by labour demand. Finally, the role played by working hours and demography in contributing to labour shortages going forward is also discussed.

In the post-pandemic recovery, unemployment fell slightly more than what could have been predicted on the basis of economic growth. To capture the magnitude of this surprise, actual changes in the EU unemployment rate are compared with predicted changes based on the estimation of the statistical relationship between unemployment and economic growth in the EU ('Okun's law') over the period 1995-2007.⁽⁴³⁾ The results suggest that the increase in unemployment in 2020 was much more contained than expected based on the Okun relation (an effect that was reversed in 2021 when GDP recovered), while in 2022 and the first half of 2023 the fall of unemployment was slightly stronger than that implied by Okun's law (see Graph I.4.10).⁽⁴⁴⁾



The fall in unemployment has come alongside a surge of job vacancies and reported labour shortages at historically high levels. The post-pandemic recovery is characterised by a much stronger increase in vacancies than previous recoveries. This is reflected in a sharp decline in the number of unemployed per vacancy (from nine in 2015-Q1 to less than three in 2023-Q1) (see Graph I.4.11). Graph I.4.13 below shows that labour shortages eased only marginally, after having

⁽⁴²⁾ See, e.g., Kiss, A., M.C. Morandini, A. Turrini, and A. Vandeplas (2022). "Slack and Tightness: Making Sense of Post COVID-19 Labour Market Developments in the EU." European Commission (DG ECFIN), *Discussion Paper 178*; European Commission (EC-DG EMPL) (2022). "Labour market and wage developments in Europe." *Annual Review 2022*.; Arpaia, A. and A. Halasz (2023). "Short- and long-run determinants of labour shortages." *Quarterly Report on the Euro Area 22* (1).

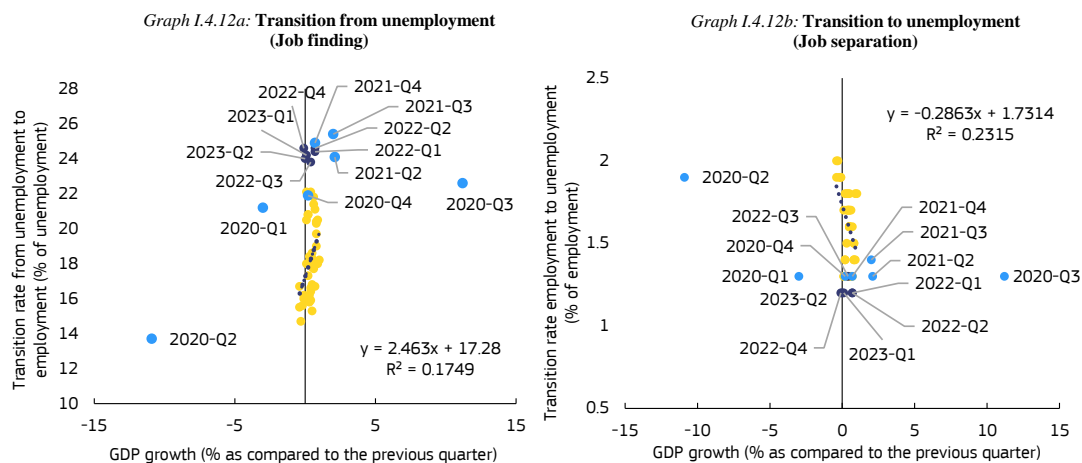
⁽⁴³⁾ The estimated Okun's law relationship for the EU, based on the period 1995-2007 is $dUR = 0.19 - 0.23 * GDP\ growth$. This means that, absent GDP growth, the unemployment rate would be expected to increase by 0.19 pps., reduced by 0.23 pps. for each percentage point of economic growth.

⁽⁴⁴⁾ In particular, the change in the EU unemployment rate was -0.9 pps. in 2022 and -0.2 pps. in the first half of 2023 against predictions of -0.6 and 0.0 pps. However, the recent surprises in falling unemployment were smaller than they were over the "job-rich" recovery of 2013-19 when the unemployment rate in the EU fell by about 0.5 pps. more per year than may have been expected based on the historical relationship with economic growth.

reached a peak in 2022-Q3, despite the slowdown in economic activity, while unemployment kept inching down. This indicates that the labour market became increasingly tight, with more firms willing to hire more workers out of a shrinking unemployment pool.

The recent unemployment decline has been supported by both resuming job finding rates and low job separation rates. Both job finding⁽⁴⁵⁾ and job separation rates⁽⁴⁶⁾ have evolved more favourably than expected given the weak economic growth, especially in the last few quarters (see Graphs I.4.12.a and b). The increase in job finding rates can be easily explained in light of the broad-based recovery in labour demand and falling unemployment. The evolution in the job separation rates is less intuitive. In contrast with initial concerns expressed after the COVID-19 outbreak, job separation rates increased only temporarily in 2020, and then fell to below pre-COVID-19 levels despite the phasing out of job retention schemes and the need for labour force reallocation to address the growing demand for skills linked to the digital and green transitions.⁽⁴⁷⁾

Graph I.4.12.a and b: Correlation between GDP growth and transitions between unemployment and employment, 2010-Q1 to 2023-Q2, EU



Note: The relationship between real GDP growth (q-o-q % change) and the transition rates between unemployment and employment (q-o-q) obtained from the panel dimension of the European Labour Force Survey is estimated over the period 2010-Q2 to 2019-Q4.

The evidence based on the Beveridge curve suggests that matching efficiency has not deteriorated. Vacancies and unemployment have largely returned to their long-term negatively sloped relationship (the so-called Beveridge curve) after a counter-clockwise movement in the unemployment-vacancy space at the onset of the pandemic (see Graph I.4.13). This suggests that matching efficiency has not deteriorated. Less efficient labour market matching would have rather implied a shift of the Beveridge curve outward and to the right, with more unemployment for a given level of vacancies, as happened after the Great Recession.

The fact that labour shortages have been increasingly reported by business managers across most sectors and occupations provides further evidence that labour market mismatch (sectoral or educational) played a marginal role in driving labour market tightness.⁽⁴⁸⁾ After a temporary spike over the pandemic, the sectoral mismatch indicator,

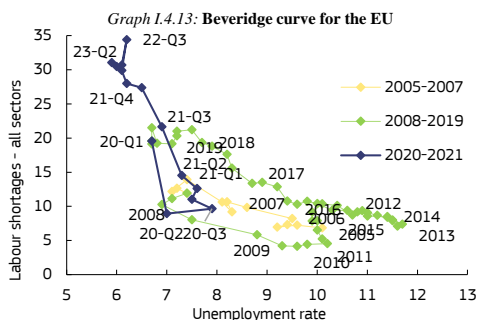
⁽⁴⁵⁾ Job finding rates are defined as transition rates from unemployment to employment.

⁽⁴⁶⁾ Job separation rates are defined as transition rates from employment to unemployment.

⁽⁴⁷⁾ Transition rates from inactivity to employment also increase as compared to the pre-pandemic period.

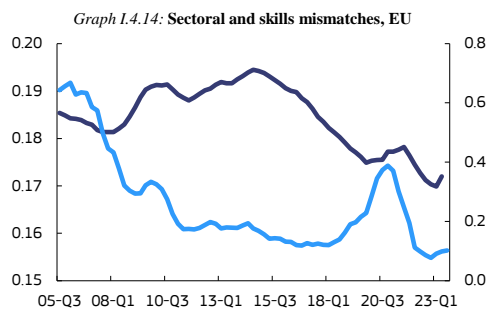
⁽⁴⁸⁾ European Commission (EC-DG EMPL) (2023). "Employment and Social Developments in Europe." *Annual Review 2023*.

measuring the dispersion of reported labour shortages across industry, services and construction, returned to historically low levels by 2022. The macro-economic skills mismatch indicator ⁽⁴⁹⁾, measuring the relative dispersion of employment rates by educational levels, followed a similar path (see Graph I.4.14). While the labour market tightening has been broad-based, some sectors (such as health care, hospitality, construction, and ICT) and occupations (such as those related to healthcare, software professionals, as well as craft workers in construction and engineering) are more affected by labour shortages than others. These patterns, predating the pandemic, may have structural drivers. ⁽⁵⁰⁾



Notes: The vacancy rate has been proxied by the share of firms in industry, services and construction indicating that labour is a “factor limiting production” in the European Business and Consumer Survey.

Source: European Commission calculations based on Eurostat (EU Labour Force Survey) and European Business and Consumer Survey.



Note: Both series were smoothed.

Source: European Commission calculations based on Eurostat (EU Labour Force Survey) and European Business and Consumer Survey.

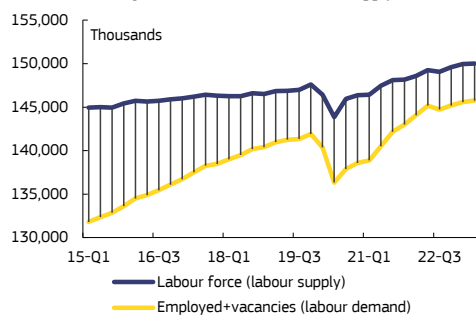
The post-pandemic tightening of the labour market seems associated with growing labour demand rather than falling labour supply. In the absence of a significant increase in labour market mismatches at the macro-economic level, potential explanations in driving labour market tightness are falling labour supply, growing labour demand, or a combination of both. The drop in participation rates that contributed to labour market tightening in the US did not materialise in the EU. On the contrary, after the COVID-19 crisis, the number of persons active on the labour market swiftly recovered and, in the second quarter of 2023, the EU labour force exceeded its pre-pandemic level by more than 1%. However, growth in labour demand was likely even stronger, as suggested by a proxy consisting of the sum of employed persons and vacancies (see Graph I.4.15). Hence, while studies on the US related the high level of post-COVID-19 labour shortages to supply factors, including demography or reduced participation, evidence for the EU suggests that labour market tightening is mainly related to labour demand outpacing labour supply. ⁽⁵¹⁾

⁽⁴⁹⁾ Macroeconomic skills mismatch is measured as the relative dispersion of employment rates by educational levels. The sectoral mismatch indicator measures the coefficient of variation of reported shortages across the three main sectors of industry, services and construction.

⁽⁵⁰⁾ See, for an analysis of structural determinants of sectoral labour shortages, European Commission (2022, op. cit.), and Arpaia and Halasz (2023, op. cit.).

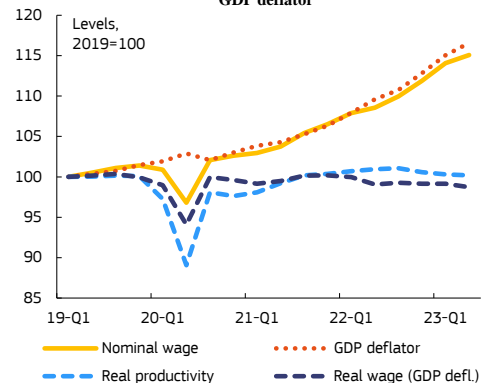
⁽⁵¹⁾ Duval, R. et al. (2022). “Labor Market Tightness in Advanced Economies.” IMF Staff Discussion Note.

Graph I.4.15: Labour demand and supply, EU



Note: Labour supply is proxied by the active population, labour demand by the sum of employed and vacancies.
Source: European Commission based on Eurostat (EU Labour Force Survey and Job Vacancy Survey excluding DK, FR, IT and MT (due to data limitations)).

Graph I.4.16: Nominal and real compensation based on GDP deflator



Falling real wages after COVID-19 may have contributed to sustained labour demand.

The rebound in labour demand in 2021 was supported by the removal of pandemic containment measures as well as by the reopening of economic activity. However, the reasons behind the persistence of labour demand over 2022 and 2023 are less obvious. A potential driver is the fact that labour became cheaper in real terms over that period.⁽⁵²⁾ Real wages fell in the aftermath of the inflationary shock which started in 2021, lagging behind productivity growth (see Graph I.4.16). When wage growth since 2019 is adjusted for the GDP deflator (proxying the measure of inflation relevant for firms), the fall in real wages is about 1% as compared to 2019, and the gap between real wage growth and real productivity growth is about 1.5%. Alongside the decline in real wages, profit shares surged in the post-pandemic period to high levels.

Additional factors may have played a role in keeping vacancies at historical high levels despite decelerating economic activity.

- Firms may have become more reluctant to lay off workers. The difficulties experienced by firms when re-hiring workers after extensive layoffs, and the expectation that job retention schemes in case of emerging redundancies could contain the cost of delaying layoffs, may have supported this hesitancy.⁽⁵³⁾ This phenomenon of “labour hoarding” may be reflected in the fall in separation rates and could be a by-product of the tightening of the labour markets.
- Part of the new vacancies could reflect the medium-term need to restructure the skill portfolio rather than the immediate need of hiring to be able to meet current demand. This interpretation is supported by the observation that in recent years labour shortages increased faster in the Member States where the working-age population is ageing faster (see Graph I.4.17). This suggests that the prospect of facing a larger replacement needs in the coming years may have triggered part of the increase in vacancies already in the present.⁽⁵⁴⁾
- Posting vacancies may have become cheaper (e.g., online posting, online interviews). This may have led some firms to post vacancies in order to have the option to hire high-profile talents among a pool of potential applicants.⁽⁵⁵⁾

⁽⁵²⁾ Gourinchas, P.O. (2023). “[Global Economy on Track but Not Yet Out of the Woods](#),” *IMF Blog*, July 25.

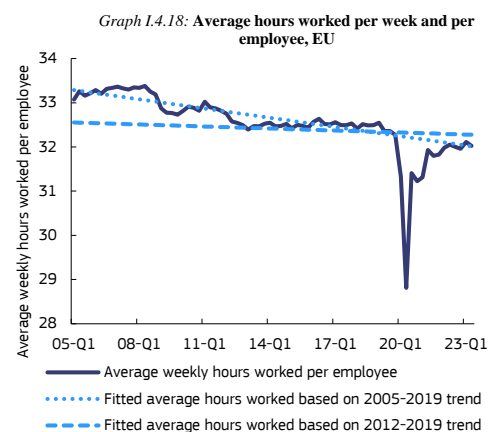
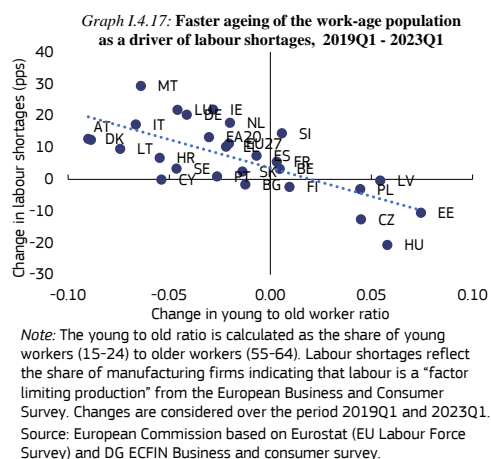
⁽⁵³⁾ Acre, O., A. Consolo, A. Dias Da Silva and M. Mohr (2023). “[More jobs but fewer hours](#),” *ECB Blog*, June 7.

⁽⁵⁴⁾ For further evidence on the link between labour shortages and ageing, see Arpaia and Halasz (2023, op. cit.).

⁽⁵⁵⁾ Chen, T.-P. (2023). “[Job Listing Abound, but Many Are Fake](#),” *Wall Street Journal*, March 20.

Going forward, the economic slowdown and diminishing corporate profits are likely to contribute to reducing labour market shortages, but structural trends will continue adding to labour market tightness. Although labour markets could remain tight, labour demand is expected to ease when corporate profits start to decrease on the back of projected real wage growth and weak aggregate demand. At first, this is expected to result in fewer job vacancies rather than increased layoffs. This view is also supported by the recent increase in job search intensity in some Member States.⁽⁵⁶⁾ However, structural drivers of labour supply, such as the long-term decline in hours worked and the decline in working age population, are expected to continue to contribute to labour market tightness.

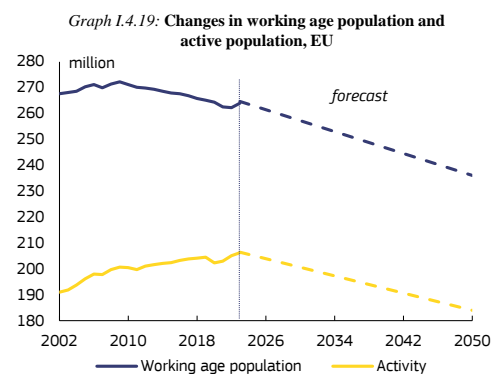
The long-term declining trend in average hours worked is expected to continue to curb effective labour supply. Despite recent increases, average hours worked remain below their pre-COVID-19 level (-1.4% in 2023-Q1 as compared to 2019-Q1) and below the level that could have been reached based on an extrapolation of the 2012-19 pre-COVID-19 declining trend (-0.8% in 2023-Q1) (see Graph I.4.18). Moreover, it seems that in those Member States where average hours worked per employee decreased most, shortages increased more. This seems to suggest that the decline in hours worked is more driven by the decisions of employees than firms and may have partly contributed to the emergence of shortages. This is also supported by the decline in involuntary part-time employment. Nonetheless, when considering a longer-term trend (2005-2019), the reduction in average working hours occurring post-COVID-19 seems in line with the historical trend. Moreover, just as participation in the labour market has never been so high, so is the total number of hours worked, which in the second quarter of 2023 was almost 3% above the level achieved at the end of 2019. New entrants to the labour market may have a preference to work less hours, but there are no data on hours worked for this group of workers. Overall, reduced working hours may have played a role in driving shortages, but in line with a tendency that was already visible before COVID-19.



⁽⁵⁶⁾ Ghayad, R. (2023). “September 2023 update: Labour markets continue to lose steam, but no signs of an imminent recession yet.” *LinkedIn Blog*, September 6.

Up to now the impact of the decline in working age population has been outweighed by a strong increase in labour market participation, but the turning point is close.

Assuming that the activity rates of people in various education and population groups remain constant, the active population (20-64) is estimated to have reached a record-high level of 205 million in 2022 and to decline to 201 million in 2030, 192 million in 2040, and 184 million in 2050 (see Graph I.4.19). Population ageing is expected to further reduce the size of the labour force, due to an increasing share of older workers, who have on average a lower labour market participation rate than prime-age workers. Such tendencies would contribute, all other things being equal, to labour shortages by curbing labour supply. Furthermore, population ageing is also expected to affect labour demand and shortages, e.g. through its positive impact on demand for specific labour-intensive activities, such as health, housing and residential care.⁽⁵⁷⁾



Source: European Commission (2023): "Employment and Social Developments in Europe", Directorate-General for Employment, Social

⁽⁵⁷⁾ European Commission (EC-DG EMPL) (2023). "[Employment and Social Developments in Europe](#)." *Annual Review 2023*.