Job vacancy and unemployment rates - Beveridge curve

Statistics Explained

Data extracted in May 2025
Planned article update: 26 November 2025

Highlights

"No concurrent increase in the unemployment rates albeit further decreases in EU/EA job vacancy rates in Q4 2024."

This article gives an overview of developments in the relationship between the Job Vacancy Rate (JVR) and the Unemployment Rate (UR) in the European Union (EU) . The most recent developments in Job Vacancy Statistics are analysed here and in the Unemployment Rate here .

Background

The Beveridge curve illustrates the negative relationship between unemployment and vacancies, i.e., as the number of job openings increases, the number of unemployed workers decreases. Movements along the curve can be attributed to changes in labour market tightness. A tight labour market (normally happening when the economy is booming) is one with low unemployment and many vacancies; labour supply is low and labour demand is high. There are labour shortages and there is upward pressure on wages. On the Beveridge curve, this situation would be represented by a point on the left-up part of the curve. In a slack labour market, on the contrary, unemployment is high and there are few vacancies; labour supply is high and labour demand low. This is associated with recessions and there is downward pressure on wages. On the Beveridge curve, this situation would be represented by a point on the right-low part of the curve. Changes in labour market tightness typically occur due to changes in the business cycle: e.g., economic contractions lead to increases in unemployment and fewer job openings, while economic expansions result in more vacant posts and lower unemployment rates.

Shifts of the Beveridge curve occur due to changes in the matching efficiency between labour supply and demand. Matching efficiency relates to the ease with which unemployed people can find employment at a given job vacancy rate. An inward shift of the curve indicates an improvement in matching efficiency, while an outward shift indicates a decline. The matching efficiency may be driven by various factors such as structural changes in the economy or the flow of information about job vacancies. In times of uneven growth across regions or industries, simultaneous increases in the vacancy and unemployment rate can be observed as the matching efficiency between labour supply and demand decreases. An enhanced flow of information on job openings, thanks to, for example, the internet, may result in concurrent decreases in the vacancy and unemployment rates, as the matching efficiency of the labour market improves.

The empirical analysis of the curve can be challenging, as both movements along the curve and shifts may occur simultaneously and at different intensities.

Figures averaged over 4 quarters

For ease of interpretation, the Job Vacancy Rate and the Unemployment Rate figures are four-quarter averages of quarterly data. As an example, the figure for Q4 2024 is an average of the data from Q1 2024, Q2 2024, Q3 2024, and Q4 2024. As a consequence, figures used in this publication may differ from those in other Eurostat releases.

The Beveridge curve for the euro area and the EU

Figure 1 displays the Beveridge curves of the euro area and of the EU . Compared to the Beveridge curve of the EU, the curve of the euro area is outward shifted, which may be attributed to an enhanced matching efficiency in non-euro countries. This implies that job-seekers and vacant posts match more effectively in these countries (see also Figure 2).

The 2008-2009 worldwide recession and the ensuing sovereign debt crisis had a major impact on the EU labour markets , with the unemployment rate soaring and job vacancies plummeting at the same time, translating in movements along the curve. Between 2010 to 2013 and most notably over the 2010-2011 period, there was a significant outward shift in the Beveridge curves. This shift may reflect disparities across EU Member States in terms of job creation, i.e., most of the job vacancies were created in countries with comparatively low unemployment. From 2014 onwards, we can observe movements along the Beveridge curve caused by an increase of the job vacancy rate along with a decrease in the unemployment rates in both the EU and the euro area.

As of the first quarter of 2020, the COVID-19 crisis translated into a marked decrease in job vacancy rates however with a comparatively low impact on unemployment rates. This may be explained as the sectors most hit by the crisis (e.g. NACE rev. 2 section I: 'Accommodation and food service activities') were also those with the highest difficulties to recruit. This trend continued until Q4 2020 when the job vacancy rates started increasing again. This rise continued until Q2 2021 which closed the loop caused by the COVID-19 crisis, with both the job vacancy and the unemployment rates reaching their pre-pandemic levels. This would suggest that labour markets recovered quickly from the COVID-19 crisis with no impact on the overall matching between labour supply and demand.

From Q3 2021 until Q4 2022, we observe a further increase in job vacancy rates but with poorer matching (outward shift of the curve). Since the turning point in Q4 2022, job vacancy rates have been decreasing sharply in both the euro area and the EU, with no concurrent increases in the unemployment rates.

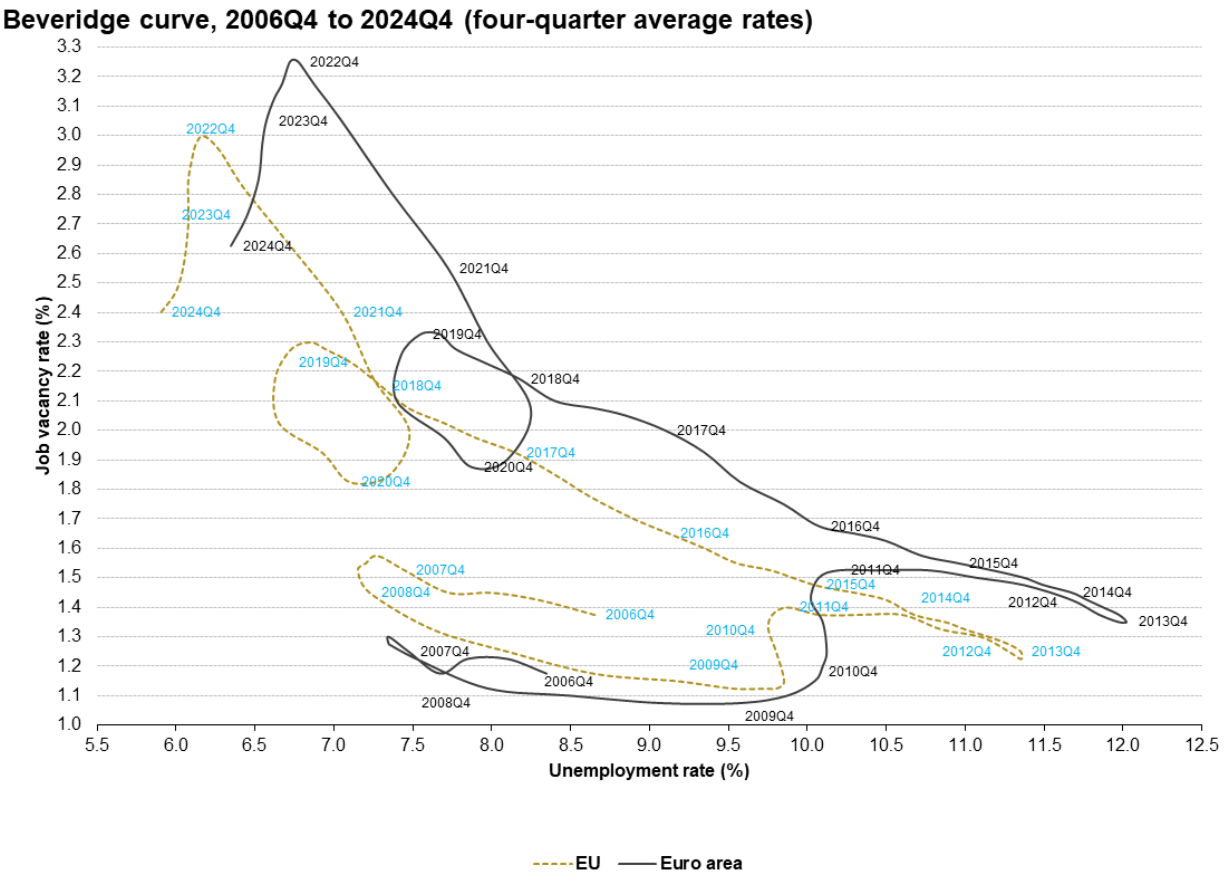

Figure 1: Beveridge curve, Q4 2006 to Q4 2024 (four-quarter average rates) Source: Eurostat (jvs_q_nace2) and (lfsq_urgan)

Cross-country Beveridge "points"

Figure 2 plots the Job Vacancy Rate and the Unemployment Rate for all countries in Q4 2024, offering insights into the matching efficiency within national labour markets. As depicted in Figure 2, the countries cluster in different groups. Countries with relatively low unemployment and high vacancy rates, such as Czechia, Malta, Germany, and the Netherlands, are positioned at the upper end of the regression curve. In contrast, countries like Greece or Spain are located at the lower end, characterized by higher unemployment rates and lower vacancy rates. Finally, countries above the curve may have a comparatively poorer matching efficiency compared to those positioned below the curve.

It is important to note that Job Vacancy Statistics do not cover the whole economy in Denmark, France, and Italy, which may impact the relationship of the Job Vacancy and Unemployment Rate.

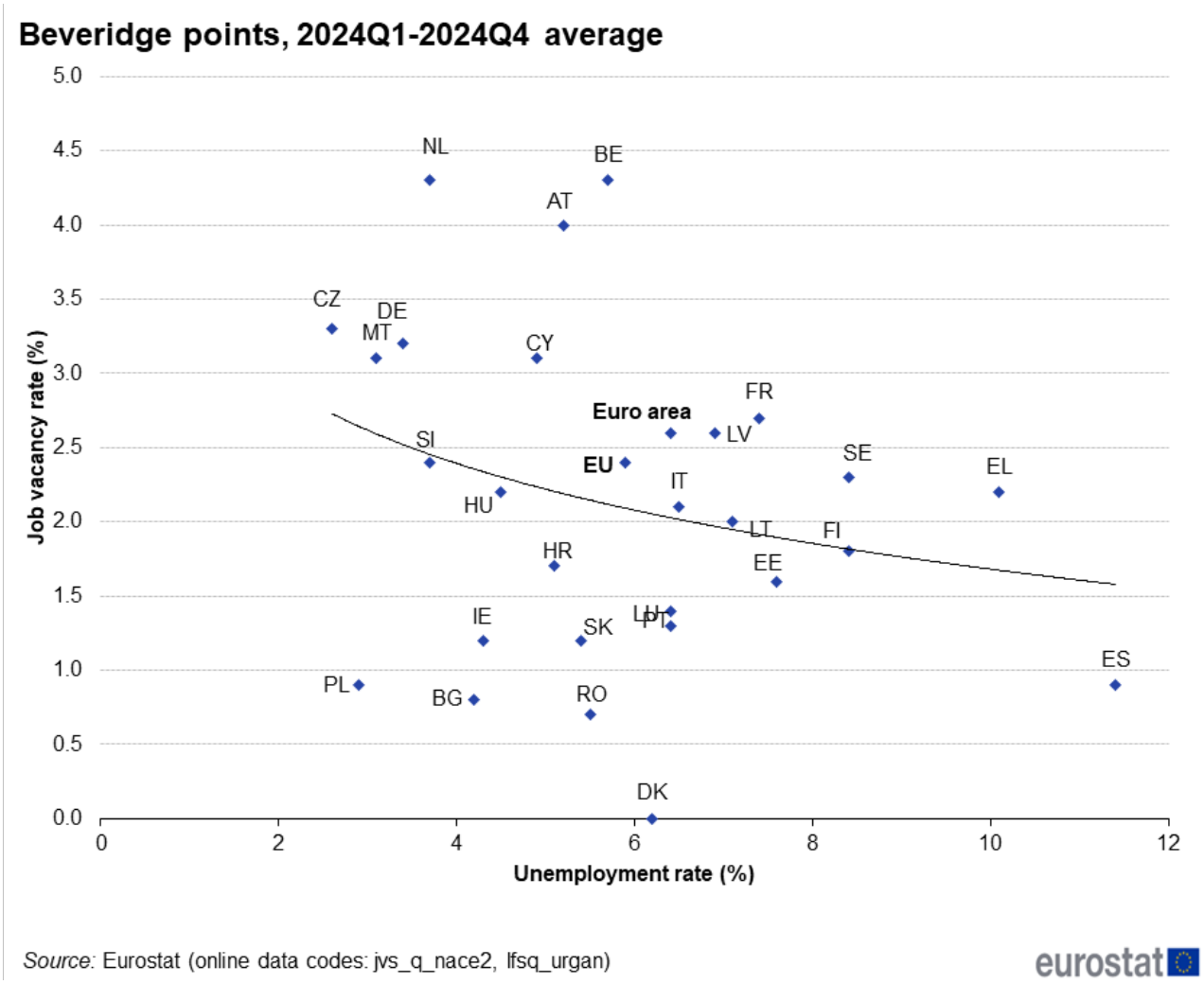

Figure 2: Beveridge points, Q1 2024-Q4 2024 average Country codes Source: Eurostat (jvs_q_nace2) and (lfsq_urgan)

Source data for tables and graphs

- Beveridge Curve and points, figures shown on this page, fourth quarter 2024

Data sources

The basis for this analysis are quarterly data on unemployment, vacancies and occupied posts . Quarterly data on job vacancies and occupied posts may be presented as broken down by economic activity and enterprise size . The national statistical authorities responsible for compiling Job Vacancy Statistics send these statistics to Eurostat . Their data are used to compile the Job Vacancy rate for the EU Member States, the EU and the euro area.

Some of the data provided by the EU Member States fail to match common criteria and there may be differences in the coverage of the data between countries. As a result, there are currently no EU totals for the actual numbers of job vacancies or occupied posts. The EU and euro area Job Vacancy Rates are calculated on the basis of the information that is available. It is therefore not possible, at present, to calculate EU or euro area Job Vacancy Rates broken down by economic activity or size of enterprise.

Context

The Job Vacancy Rate, in part, reflects the unmet demand for labour, as well as potential mismatches between the skills and availability of those who are unemployed and those sought by employers. Job Vacancy Statistics are used by the European Commission and the European Central Bank (ECB) to analyse and monitor the evolution of the labour market at national and European level. These statistics are also a key indicator used for the assessment of the business cycle and for a structural analysis of the economy.

Policy developments in this area have mainly focused on trying to improve the labour market by more closely matching supply and demand, through:

- modernising and strengthening labour market institutions, notably employment services;
- removing obstacles to worker mobility across Europe;
- better anticipating skill needs, labour market shortages and bottlenecks;
- managing economic migration ;
- improving the adaptability of workers and enterprises so that there is a greater capacity to anticipate, trigger and absorb economic and social change.

EU policies in the area of job vacancies aim to improve the functioning of the labour market by trying to more closely match supply and demand. In order to enable job seekers to consult all vacancies publicised in each of the EU Member State's employment services, the European job mobility portal EURES was set up.

Explore further

Other articles

- Job vacancy statistics
- Employment - annual statistics

Database

- Job vacancies , see:

Job vacancy statistics by NACE Rev. 2 activity - quarterly data (from 2001 onwards) (jvs_q_nace2)

Job vacancy statistics by NACE Rev. 2 activity, occupation and NUTS 2 regions - quarterly data (jvs_q_isco_r2)

Job vacancy rate by NACE Rev. 2 activity - annual data (from 2001 onwards) (jvs_a_rate_r2)

Job vacancy statistics - historical data (jvs_h)

Job vacancy statistics by occupation and NUTS 2 regions and NACE Rev 1.1 activity - annual data (2000-2008) (jvs_a_nace1)

Job vacancy statistics by NACE Rev. 1.1 activity - quarterly data, (2001Q1-2009Q4) (jvs_q_nace1)

Job vacancy statistics by occupation, NUTS 2 regions and NACE Rev. 2 activity - annual data (2008-2015) (jvs_a_nace2)

- Employment and unemployment (LFS)

Thematic section

- Labour market, see Job vacancies

Publications

- The Pocketbook European Social Statistics

Selected datasets

- Job vacancies , see:

Job vacancies in number and % - NACE Rev. 2, B-S, quarterly data (tps00172)

- Employment and unemployment (LFS)

Methodology

- 1st and 2nd International Workshops on Methodologies for Job Vacancy Statistics in Nuremberg (2008) and Neuchâtel (2009) - Proceedings
- Job vacancy statistics (ESMS metadata file — jvs_esms)

External links

- EURES , the European jobs and mobility portal
- OECD - Data by theme - Labour - Labour force statistics - Short-term statistics - Registered Unemployed and Job Vacancies (MEI): Job Vacancies