Office for National Statistics

Statistical bulletin

Regional and subregional labour productivity, UK: 2023

Regional and subregional output per hour worked and output per job performance levels. These are official statistics in development.

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Release date:
19 June 2025

Next release:
June 2026

Notice

29 September 2025

An error has been discovered in the calculation of chained volume measures of Gross Value Added in the 'Regional economic activity by gross domestic product, UK: 1998 to 2023' publication. Because those data are used in the calculation of regional and subregional productivity data, then this has caused a subsequent error in the Subregional Productivity chained volume data for selected ITL3 areas and Combined Authorities.

Corrected versions of the data are currently being processed. Until the new data are available, we would recommend not using tables A5 and B5 in the ITL3 and Combined Authority datasets and instead to use the current price data provided within the datasets.

We apologise for any inconvenience caused.

Table of contents

1 . Main points

- Labour productivity, whether measured by output per hour worked or by output per job, was higher in London and the South East than the UK average in the latest 2023 figures; in London, output per hour worked was 28.5% above that of the UK average (represented by 0.0%), and output per job was 35.3% above that of the UK average.
- The North West made the largest positive contribution (0.9%) to productivity growth in 2023 when compared with 2019 (pre-coronavirus (COVID-19) pandemic), while London made the largest negative contribution (negative 0.3%).
- The North West showed a cumulative average annual growth rate of 2.4% from 2019 to 2023, the largest of any region.
- Subregional data on labour productivity are available in the accompanying datasets.
- Because of the recent issues with sample sizes for the Annual Population Survey, users should be aware there may be an increase in volatility in the subregional productivity data for 2023.

2 . Regional labour productivity

For the devolved nations of the UK and English regions, this is the fourth annual publication of labour productivity since the coronavirus (COVID-19) pandemic period (2020 to 2023).

Our headline measure of productivity is output per hour worked. This bulletin is consistent with labour market data from our Labour market overview, UK: May 2025 bulletin, and is based on output for the year 2023, as reported in the most recent annual estimates of economic activity by UK country, region and local area found in our Regional economic activity by gross domestic product, UK: 1998 to 2023 bulletin.

London had the highest productivity level of any UK region in 2023. Its output per hour worked was 28.5% higher than the UK average, maintaining its relative strength, a continuing trend since records began in 1998.

Output per hour worked levels for the South East were also above the UK average by 7.7%. All other regions showed output per hour worked levels as below the UK average. Wales, the West Midlands, the East Midlands and the North East had the four lowest levels of output per hour worked, at negative 15.1%, 14.8%, 14.7% and 14.6%, respectively compared with the UK average.

Figure 1: London was 28.5% more productive than the UK average in terms of output per hour worked

Output per hour worked by International Territorial Level 1 region relative to the UK average, UK, 2023

Notes:

1. The baseline (0.00) in the figure is overall productivity level for the UK.

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Shifts of economic activity from one region to another (the allocation effect) can be an important factor for productivity growth. Figure 2 shows the growth and the contribution of each region to the total output per hour growth alongside the allocation/extra region contribution (0.0%) and the relative size of gross value added (GVA) output in current price (bubbles) of the region.

Growth differs from contributions, as contributions measure growth weighted by the relative size of GVA output in current price of the region.

The North West contributed the most to UK output per hour growth in 2023, compared with 2019, and showed the strongest growth.

In contrast, London made the only negative contribution to UK output per hour growth in 2023, compared with 2019. This is because of a negative growth, weighted by its large relative size of GVA output.

Figure 2: The North West made the largest positive contribution to productivity growth in 2023 when compared with 2019

Contributions to UK growth in output per hour by International Territorial Level (ITL1) region, UK, 2023

Notes:

1. The allocation effect includes shifts in the proportion of economic activity across regions, as well as economic activity that cannot be assigned to any specific region. The size shown in the graph for the Allocation/Extra-regio refers to economic activity that cannot be assigned to any specific region only.

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UK output per hour worked has grown at a cumulative average annual rate of 0.7% from 2019 to 2023. Figure 3 shows the North West experiencing growth of 2.4% annually, which is the largest of any region. London had the largest fall of any region, at negative 0.3%.

Figure 3: The North West showed a cumulative average annual growth rate of 2.4% from 2019 to 2023, the largest of any region

Cumulative average annual growth rates between 2019 and 2023 for total hours worked, output per hour worked, gross value added, UK

Notes:

1. An increase in hours worked will reduce output per hour, while a decrease in hours worked will lift output per hour.

2. Growth rates are calculated as cumulative average annual growth rates.

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3 . Subregional labour productivity

Subregional data on labour productivity are available in the accompanying datasets in Section 4: Data on regional and subregional labour productivity. The data are supplied for the International Territorial Levels ITL2 and ITL3 geographies as well as for combined authorities and other selected enterprise areas. A less extensive set of data is also provided for local authorities.

Users should note that volatility in the data will tend to increase as the geography gets smaller. For this reason, the subregional productivity datasets always include "smoothed" current price data, alongside the "unsmoothed" current price and chained volume measures. We recommend users refer to the smoothed datasets when comparing productivity levels across the country.

An additional caution for this year's release is that the data use input from the Annual Population Survey (APS). Because of issues with declining sample sizes, data from the 2023 APS were of reduced quality compared with other years. It should be noted that the APS is not the main input to the labour market inputs used in this publication. Nevertheless, because the APS is used for some selected aspects of the productivity jobs and productivity hours calculations then this means users should anticipate higher volatility than usual in the 2023 data.

Additionally, users should be aware that the APS is currently awaiting a re-weighting to match to Census 2021 population. This re-weighting is due to take place in the year ahead and will mean that in next year's release some small revisions to the subregional productivity jobs and hours published in today's release are likely.

4 . Data on regional and subregional labour productivity

Annual regional labour productivity
Dataset PRODBYREG | Released 19 June 2025
Annual estimates of output per job and output per hour relative to the UK, for the whole economy across 13 regions and nations in the UK, from 1998. Prior to July 2019, these data were published as Table 9 of dataset LPROD01.

Regional productivity time series
Time series RPRD | Released 19 June 2025
Annual estimates of output per job and output per hour relative to the UK, for the whole economy across 13 regions and nations in the UK, from 1998.

Subregional productivity: labour productivity indices by combined authority and other enterprise regions
Dataset | Released on 19 June 2025
Annual labour productivity (output per hour and output per job) indices by combined authority and other economic enterprise regions. These are official statistics in development.

Subregional productivity: labour productivity indices by city region
Dataset | Released on 19 June 2025
Annual labour productivity (output per hour and output per job) indices by city regions. These are official statistics in development.

Subregional productivity: labour productivity indices by local authority district
Dataset | Released on 19 June 2025
Annual labour productivity (output per hour and output per job) indices by local authority districts. These are official statistics in development.

Subregional productivity: labour productivity indices by UK ITL2 and ITL3 subregions
Dataset | Dataset ID: SRPROD01 | Released on 19 June 2025
Annual labour productivity (output per hour and output per job) indices by UK ITL2 and ITL3 subregions. These are official statistics in development.

5 . Glossary

Labour inputs

Labour inputs in this release are measured in terms of jobs (“productivity jobs”) and hours worked (“productivity hours”) for an industry within a geographic area.

Labour productivity

Labour productivity is calculated by dividing output by labour input.

Output

Output refers to gross value added (GVA), which is an estimate of the volume of goods and services produced by an industry within a geographic area, and in aggregate across industries for a geographic area.

Region

Regions or devolved nations of the UK distinguished by International Territorial Level 1 (ITL1) regions.

6 . Data sources and quality

We have planned continued improvements to the Labour Force Survey (LFS) throughout 2025 and into 2026, once new subnational population projections are available. The results in this article, while consistent with labour market data from our Labour market overview, UK: May 2025 bulletin, should be considered with this forthcoming revision in mind.

For estimates of regional productivity relative to the UK, productivity jobs are calculated by summing numbers of employees, the self-employed and two smaller components, which are His Majesty’s Forces and government-supported trainees. These data come from two principal sources within the Office for National Statistics : Short-Term Employment Survey (STES) data and the Labour Force Survey (LFS).

Productivity hours are derived from estimates of average hours (derived from the LFS micro-dataset) and productivity jobs. The subregional estimates are calculated in a similar manner, but also encompass data taken from annual surveys including the Business Register and Employment Survey (BRES) and the Annual Population Survey. Note that the subregional data are constrained to equal regional totals.

Please note that this output always includes some revisions to the data compared with last year’s publication. The revisions are typically largest for the previous year (2022) because of new input data leading to revisions to gross value added (GVA) and to labour market inputs such as the Business Register and Employment Survey (BRES) for that year. However, revisions can also occur for earlier years as well. Changes to geography can also lead to revisions.

The geographies used in the output include the latest 2025 International Territorial Levels (ITL) geographies. The ITL1 geography is unchanged from last year. However, the ITL2 and ITL3 geographies have been revised since the previous edition of this output. This revision to the ITL geography has also led to some revisions to the local authority data in the output (because of the methods employed in its calculation).

Please note that because English Local Enterprise Partnerships no longer exist, then the table previously providing LEP data has been discontinued.

Strengths and limitations

This release reports regional labour productivity estimates for 2023 for International Territorial Level 1 (ITL1) regions. The index levels reported in the data are based on gross value added (GVA) per unit of labour input, in current prices published as indices (UK=100) on an annual basis. We also publish official statistics in development for output per hour and output per job that use chained volume measures (CVM) GVA as indices (2022=100).

The release also includes labour productivity estimates for ITL2 and ITL3 regions together with local authority districts, and combined authorities and selected other enterprise regions. Please note that at smaller geographies, volatility within the data will increase. Therefore, for subnational productivity data, we recommend using the smoothed values provided in the datasets.

The data will be affected by unmeasured differences in regional prices, which might affect the relative rankings of regions once the unmeasured differences are adjusted for.

Comparability and consistency

The output statistics in this release are consistent with the latest analysis on Regional economic activity by gross domestic product, UK. Productivity in this release uses measures of labour derived from the working population, unlike measures of regional GVA per head.

The labour input measures used in this release are estimated based on data from a number of ONS surveys including the latest Short-Term Employment Survey; the Business Register and Employment Survey; the Labour Force Survey and the Annual Population Survey.

Official statistics in development

These statistics are labelled as “official statistics in development”. Until September 2023, these were called “experimental statistics”. Read more about the change in the Guide to official statistics in development.

We are developing how we collect and produce the data to improve the quality of these statistics. Once the developments are complete, we will review the statistics with the Statistics Head of Profession. We will decide whether the statistics are of sufficient quality and value to be published as official statistics, or whether further development is needed. Production may be stopped if they are not of sufficient quality or value. Users will be informed of the outcome and any changes.

We value your feedback on these statistics. Contact us at productivity@ons.gov.uk or subnational@ons.gov.uk.

7 . Related links

Labour market overview, UK: May 2025
Bulletin |Released 13 May 2025
Estimates of employment, unemployment, economic inactivity, and other employment-related statistics for the UK.

Productivity flash estimate and overview, UK: January to March 2025 and October to December 2024
Bulletin | Released 15 May 2025
The main findings from official statistics and analysis of UK productivity, presenting a summary of recent developments.

Regional economic activity by gross domestic product, UK: 1998 to 2023
Bulletin | Released 17 April 2025
Annual estimates of economic activity by UK country, region and local area using gross domestic product (GDP). Estimates are available in current market prices and in chained volume measures and include a full industry breakdown of balanced regional gross value added (GVA(B)).

8 . Cite this statistical bulletin

Office for National Statistics (ONS), released 19 June 2025, ONS website, statistical bulletin, Regional and subregional labour productivity, UK: 2023.