

Statistical bulletin

Regional and subregional labour productivity, UK: 2022

Regional and subregional output per hour and output per job performance levels.

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Notice

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From 17 June 2024, this bulletin replaces our [Regional labour productivity, UK bulletin](#) and our [Subregional productivity in the UK article](#) series. This decision has been made as part of a wider ONS prioritisation exercise. Please contact productivity@ons.gov.uk and subnational@ons.gov.uk with any questions.

Table of contents

1. [Main points](#)
2. [Regional productivity relative to the UK](#)
3. [Subregional labour productivity](#)
4. [Regional and subregional labour productivity data](#)
5. [Glossary](#)
6. [Measuring the data](#)
7. [Strengths and limitations](#)
8. [Related links](#)
9. [Cite this bulletin](#)

1 . Main points

- Labour productivity, measured by output per hour worked, was higher in London and the South East than the UK average in the latest 2022 figures; in London, output per hour worked was 26.2% above the UK average, and in Wales, output per hour worked was 17.3% below the UK average.
- The South East and North West made the largest positive contribution (0.8%) to productivity growth in 2022 when compared with 2019.
- The North West showed a cumulative average annual growth rate of 2.6%, from 2019 to 2022, the largest of any region.
- Labour productivity (output per hour worked) increased in 30 out of the 41 ITL2 subregions between 2019 and 2022.
- The ITL3 subregion with the highest labour productivity in 2022 was Tower Hamlets and the subregion with the lowest was Powys.

2 . Regional productivity relative to the UK

For the devolved nations of the UK and English regions, this is the third annual publication of relative labour productivity since the coronavirus (COVID-19) pandemic period (2020 to 2022). The data reports the labour productivity performance levels of UK regions relative to the UK overall. Our headline measure of productivity is output per hour worked where output is the Gross Value Added (GVA). This bulletin is based on output for the year 2022, 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 2022 bulletin](#).

London had the highest productivity level of any UK region in 2022. Its output per hour was 26.2% 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 (10.8%). All the other regions showed output per hour worked levels below the UK average. Wales and the East Midlands had the two lowest levels of output per hour worked, at 17.3% and 15.8% lower than the UK average, respectively.

Figure 1: London was 26.2% more productive than the UK average in terms of output per hour worked

Output per hour worked by International Territorial Level 1 (ITL1) region, relative to the UK average, UK, 2022

Notes:

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

Shifts in economic activity from one region to another (the allocation effect) can be an important factor in productivity growth. Figure 2 shows the growth (dots) and the contribution (bars) of each region to the total output per hour growth alongside the allocation effect (positive 0.1%).

In 2022, the South East and the North West contributed the most to UK output per hour growth compared with 2019. However, the North West had stronger growth than the South East.

Northern Ireland, and Yorkshire and the Humber had stronger growth than the South East, yet a smaller contribution. This is a result of their relative sizes. Northern Ireland and Yorkshire and the Humber are smaller, and faster growth does not compensate sufficiently to overtake the impact of the larger South East on the UK total.

Growth can differ greatly from contributions because of the proportion of hours worked in each region. When UK growth is small there is little contrast between regional contributions.

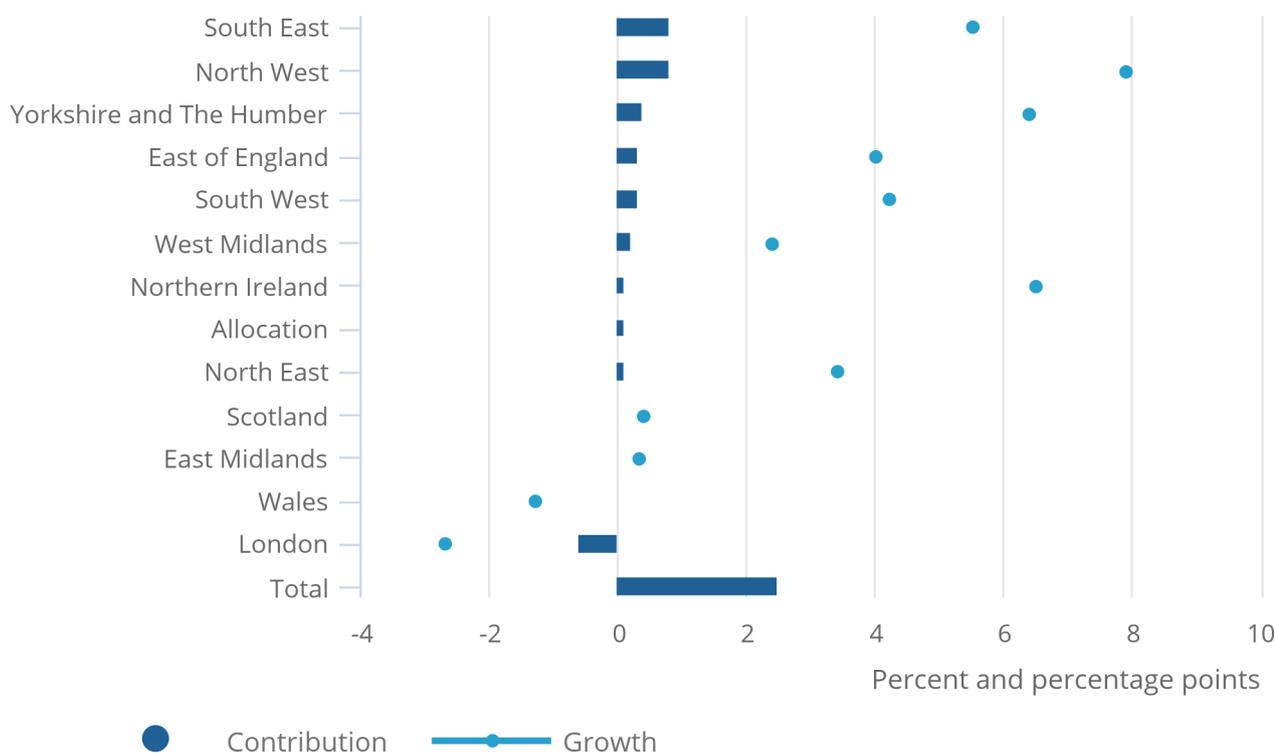
In contrast, London made the largest negative contribution to UK growth in output per hour by region, compared with 2019. This is because, despite London being the region with the highest levels of productivity (since records began in 1998, compared with the UK average), its productivity growth was lower in 2022 compared with 2019. Owing to its size, this means London has the largest negative contribution to productivity growth of any region.

Figure 2: The South East and the North West made the largest positive contribution to productivity growth in 2022 when compared with 2019

Contributions to UK growth in output per hour by International Territorial Level (ITL1) region, UK, 2022 compared with 2019

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Contributions to UK growth in output per hour by International Territorial Level (ITL1) region, UK, 2022 compared with 2019



Source: Office for National Statistics

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.

UK output per hour worked has grown at a cumulative average annual rate of 0.8% from 2019 to 2022. Figure 3 shows the North West experiencing growth of 2.6% annually, which is the largest of any region, and London the largest fall of any region, at 0.9%.

Figure 3: The North West showed a cumulative average annual growth rate of 2.6% from 2019 to 2022, the largest of any region

Cumulative average annual growth rates between 2019 and 2022 for total hours worked, output per hour worked, gross value added, UK

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Cumulative average annual growth rates between 2019 and 2022 for total hours worked, output per hour worked, gross value added, UK



Source: Office for National Statistics

Notes:

1. Estimates of total hours worked are sign reversed to reflect how they affect output per hour. 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.

3 . Subregional labour productivity

3.1 Trends in subregional labour productivity

The overall changes in labour productivity (output per hour worked) in International Territorial Level (ITL2) subregions between 2004 and 2022 can be broken down into different time periods, as shown in Figure 4:

- the 2004 to 2008 period covers a period of strong output and productivity growth before the 2008 recession
- the 2008 to 2011 period covers the impact of, and immediate recovery from, the recession
- the 2011 to 2019 period covers a time of relatively subdued productivity growth
- the 2019 to 2022 period shows the influence of, and subsequent recovery from, the coronavirus (COVID-19) pandemic

In 2019 to 2022, labour productivity (output per hour worked) increased in 30 out of the 41 ITL2 subregions, with 26 of these also experiencing a rise in total GVA over the period. The ITL2 subregions with the highest productivity increases over this period were East Yorkshire and Northern Lincolnshire; Greater Manchester; Shropshire and Staffordshire; Lancashire; Surrey, East and West Sussex; and Cheshire.

Labour productivity declined in 11 ITL2 areas over the 2019 to 2022 period, with eight of these subregions also experiencing a decline in total GVA. This included four out of five of London's ITL2 subregions (Inner London East together with the 3 Outer London ITL2 subregions). The largest productivity decline was in the ITL2 subregion of Outer London West and North West.

Figure 4: Labour productivity declined in Outer London ITL2 subregions between 2019 and 2022

Average annual growth rates of chained volume measures (CVM) output per hour worked, International Territorial Level (ITL2) subregions, 2004 to 2008, 2008 to 2011, 2011 to 2019, 2019 to 2022.

3.2 Labour productivity levels of UK subregions in 2022

ITL2 subregions

In 2022, Inner London West continued to have the highest labour productivity (as measured by output per hour worked, in current prices) at 52% above the UK average. Overall, 10 out of the 41 ITL2 areas had labour productivity above the UK average. Eight of these areas were located in the Greater South East. The others were Cheshire and Eastern Scotland ITL2 subregions.

Three ITL2 subregions had labour productivity levels of 20% or more below the UK average. These were West Wales and the Valleys, South Yorkshire, and the ITL2 subregion of Cornwall and the Isles of Scilly.

ITL3 subregions

Figure 5 shows labour productivity for all 179 ITL3 subregions in the United Kingdom, grouped by ITL1 countries and regions in 2022.

In 2022, Tower Hamlets in London had the highest productivity level, 75% higher than the UK average. The highest productivity level outside London was in North Hampshire, in the South East of England (54% above the UK average). The City of Edinburgh had the highest productivity in Scotland (23% above the UK average). Cheshire East had the highest productivity in the north of England (15% above the UK average).

There were 23 ITL 3 regions with labour productivity more than 20% below the UK average. The lowest productivity was in Powys in Wales.

Figure 5: The majority of ITL3 subregions with productivity above the UK average are located either in London or in the South East

Current price output per hour worked for all International Territorial Level (ITL3) subregions in Great Britain, grouped by ITL1 regions and countries, smoothed, 2022, UK=100

Local Authority Districts

Local authority districts are the lowest geography level for which data are published in this release. Figure 6 shows the levels of labour productivity in 2022 for all the local authority districts in the UK, relative to the UK average. It shows that the local authority districts with the highest levels of productivity are generally located in the Greater South East of England, with the City of London, Rushmore, and Runnymede local authority districts having the highest levels of labour productivity.

The local authority districts with the lowest levels of labour productivity are mostly rural or coastal, with the lowest values in 2022 occurring in West Devon, Powys, and Wyre Forest.

Figure 6: The local authorities with the lowest levels of productivity are mostly rural or coastal

Current price output per hour worked, local authority districts, UK, smoothed, 2022, UK=100

4 . Regional and subregional labour productivity data

[Annual regional labour productivity](#)

Dataset PRODBYREG | Released 17 June 2024

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 17 June 2024

Annual output per hour and output per job for the whole economy across 13 regions and nations in the UK.

[Subregional productivity: labour productivity indices by city region](#)

Dataset | Released on 17 June 2024

Annual labour productivity (output per hour and output per job) indices by city regions.

Keywords: cities, region, NUTS, combined authorities, nominal GVA

[Subregional productivity: labour productivity indices by economic enterprise region](#)

Dataset | Dataset ID: SRPROD02 | Released on 17 June 2024

Annual labour productivity (output per hour and output per job) indices by economic enterprise regions.

Keywords: sub-regional, local area productivity, city regions, enterprise regions

[Subregional productivity: labour productivity indices by local authority district](#)

Dataset | Released on 17 June 2024

Annual labour productivity (output per hour and output per job) indices by local authority districts.

Keywords: cities, combined authorities, nominal GVA, productivity, subregional, local authority district

[Subregional productivity: labour productivity indices by UK ITL2 and ITL3 subregions](#)

Dataset | Dataset ID: SRPROD01 | Released on 17 June 2024

Annual labour productivity (output per hour and output per job) indices by UK ITL2 and ITL3 subregions.

Keywords: cities, local authorities, combined authorities, nominal GVA

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, and in aggregate across industries for a geographic area.

Labour productivity

Labour productivity is calculated by dividing output by labour inputs.

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.

Regions

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

Greater South East

Area comprising London, the East of England and the South East ITL1 regions.

6 . Measuring the data

For estimates of regional productivity relative to the UK, "productivity jobs" is calculated by summing numbers of employees, the self-employed and two smaller components: His Majesty's Forces (HMF) and government-supported trainees (GST). These data come from two principal sources: our Short-Term Employment Survey (STES) data and our [Labour Force Survey \(LFS\)](#). Productivity hours are derived from estimates of average hours (derived from the LFS micro-dataset) and productivity jobs.

Subregional productivity jobs are calculated to constrain to the regional values. They are calculated using the ONS [Output per job dataset](#), which encompasses employees from the [Business Register and Employment Survey \(BRES\)](#), self-employment jobs from the [Annual Population Survey \(APS\)](#), government-supported trainees, and HM Forces.

Subregional productivity hours are also calculated to constrain to the regional values. Average hours worked per employee job by industry in ITL3 subregions is calculated from the APS and then combined with employee jobs data from BRES to calculate employee hours. Self-employed hours from the APS, and data for government training schemes and HM Forces are also added. An alternative method is used for Northern Ireland only, with ITL3 data calculated using the Annual Survey of Hours and Earnings (ASHE).

7 . Strengths and limitations

This release reports labour productivity estimates for 2022 for [International Territorial Level regions \(ITL1\)](#) and subregions (ITL2 and ITL3), city regions and enterprise 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 chain volume measures (CVM) GVA as indices (2019=100).

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.

In the subregional tables, a range of geographies are provided. For the smaller geographic areas, such as ITL3 areas or local authorities, there can be higher volatility in the estimates, owing to smaller samples. Therefore, the subregional tables provide both temporally smoothed and unsmoothed estimates for current price data for ITLs, city regions and enterprise regions. For local authorities, only smoothed estimates are provided.

Comparability and consistency

The output statistics in this release are consistent with the latest analysis in our [Regional economic activity by gross domestic product, UK](#) bulletin. 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 the latest Short-Term Employment Survey (STES) data and the Labour Force Survey (LFS) data from the Office for National Statistics (ONS) for regional data, and from the Annual Population Survey (APS) and the Business Register and Employment Survey (BRES) for subregional data.

8 . Related links

[Labour market in the regions of the UK: June 2024](#)

Bulletin | Released 11 June 2024

Regional, local authority and parliamentary constituency breakdowns of changes in UK employment, unemployment, economic inactivity and other related statistics. These are official statistics in development.

[Productivity flash estimate and overview, UK: January to March 2024 and October to December 2023](#)

Bulletin | Released 14 May 2024

Productivity flash estimates for Quarter 1 (January to March) 2024, based on the GDP first quarterly estimate and labour market statistics, and productivity overview for Quarter 4 (October to December) 2023.

[Regional economic activity by gross domestic product, UK: 1998 to 2022](#)

Bulletin | Released 24 April 2024

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)).

9 . Cite this bulletin

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