Office for National Statistics

Statistical bulletin

Regional labour productivity, UK: 2021

Regional output per hour and output per job performance levels.

Contact:
Sara Zella
productivity@ons.gov.uk
+44 1633 456945

Release date:
20 June 2023

Next release:
2024

Notice

17 June 2024

This bulletin has been discontinued, as it is merging with our Subregional productivity in the UK article. The latest information on regional productivity in the UK will be included within our new, annual bulletin: Regional and subregional labour productivity, UK, launching on 17 June 2024. 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. Regional labour productivity data

4. Glossary

5. Measuring the data

6. Strengths and limitations

7. Related links

8. Cite this bulletin

1 . Main points

- Labour productivity, measured by output per hour worked or output per job, has been significantly higher in London and the South East for a prolonged period of time, and this was maintained in the latest 2021 figures.
- In London, output per hour worked was 33.2% above that of the UK average, and output per job was 41.4% above that of the UK average.
- Output per hour worked in North East was 17.4% below the UK average in 2021.

2 . Regional productivity relative to the UK

For devolved nations of the UK and English regions, these are the second estimates of relative labour productivity covering part of the coronavirus (COVID-19) period. The data report the labour productivity performance levels of UK regions relative to the UK overall. Our headline measure of productivity is output per hour worked. This bulletin is based on output for the year 2021, 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 2021 bulletin.

London had the highest productivity level of any UK region in 2021, with output per hour more than 30% higher than the UK average, maintaining its relative strength, a continuing trend since 1998. Output per hour worked levels for the South East were also above the UK average. All the other regions showed output per hour worked levels as below the UK average. In particular, the North East, Wales, and Yorkshire and The Humber had the three lowest levels of output per hour worked compared with the UK average.

Figure 1: London was over 30% 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, 2021

Notes:

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

Download the data

.xlsx

Output per job is an alternative measure of labour productivity and can produce different results if average hours worked per job varies across regions, reflecting different part-time and full-time working patterns. Across the UK, many workers were furloughed for much of 2021, which generally reduced levels of output per job, as shown in Section 3 of our Productivity economic commentary: January to March 2020 article.

Figure 2 shows the levels of output per job in each region compared with the UK average. Output per job levels in London were significantly higher than the UK average level in 2021 and the South East levels were also above the UK average. Similar to output per hour, the North East, Wales, and Yorkshire and The Humber had the lowest level of output per job compared with the UK average.

Figure 2: Productivity measured as output per job in London was over 40% higher than the UK average

Output per job by International Territorial Level 1 region relative to the UK average, 2021

Notes:

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

Download the data

.xlsx

Productivity growth is important because increases in output per hour worked allow:

- salaries and profits to rise
- standards of living to improve
- society to fund better public services

In the long run, regions that experience faster, sustained growth in productivity should have greater levels of prosperity than other regions.

Figure 3 shows the growth of output per hour in each International Territorial Level (ITL1) region in 2021 compared with 2019.

The majority of the UK's 12 ITL1 regions experienced growth in output per hour in 2021. The highest growth of output per hour was 8.6% in Northern Ireland, whereas the largest fall was by 3.9% in the North East. The reason for the growth in output per hour during the coronavirus (COVID-19) pandemic is discussed in our Productivity economic commentary, UK: October to December 2020 article, but variation in the response rate for the Labour Force Survey means these patterns should be treated with caution.

Figure 3: Most regions showed positive productivity growth

Output per hour growth rates by International Territorial Level (ITL1) region, UK, 2021 compared with 2019

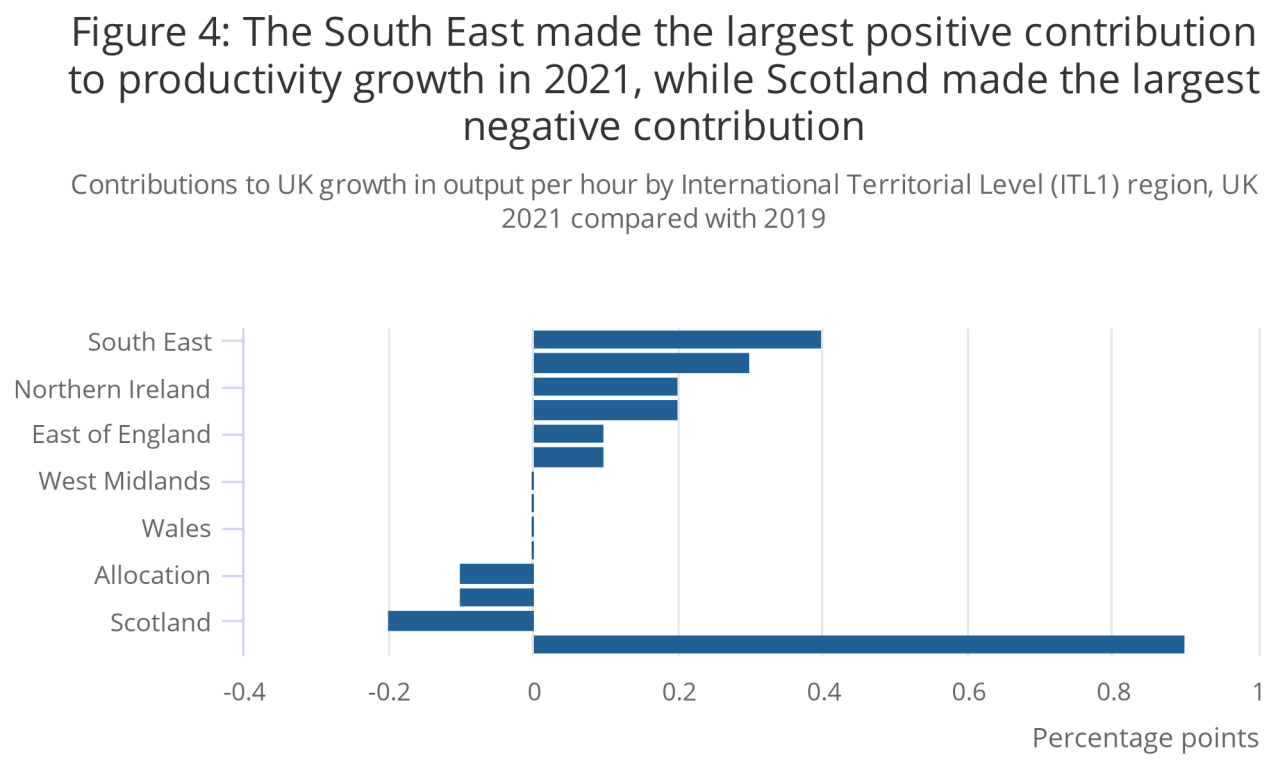
Download the data

.xlsx

Shifts of economic activity from one region to another (the allocation effect) can be an important factor for productivity growth. Figure 4 shows the contribution of each region to the total output per hour growth alongside the allocation effect (negative 0.1). In 2021, the South East contributed the most to UK output per hour growth, despite Northern Ireland growing more strongly. This is as a result of their relative sizes - Northern Ireland is smaller and faster growth does not compensate sufficiently to overtake the impact of the larger South East on the UK total. In contrast, Scotland made the greatest negative contribution.

Figure 4: The South East made the largest positive contribution to productivity growth in 2021, while Scotland made the largest negative contribution

Contributions to UK growth in output per hour by International Territorial Level (ITL1) region, UK 2021 compared with 2019



Source: Office for National Statistics

Notes:

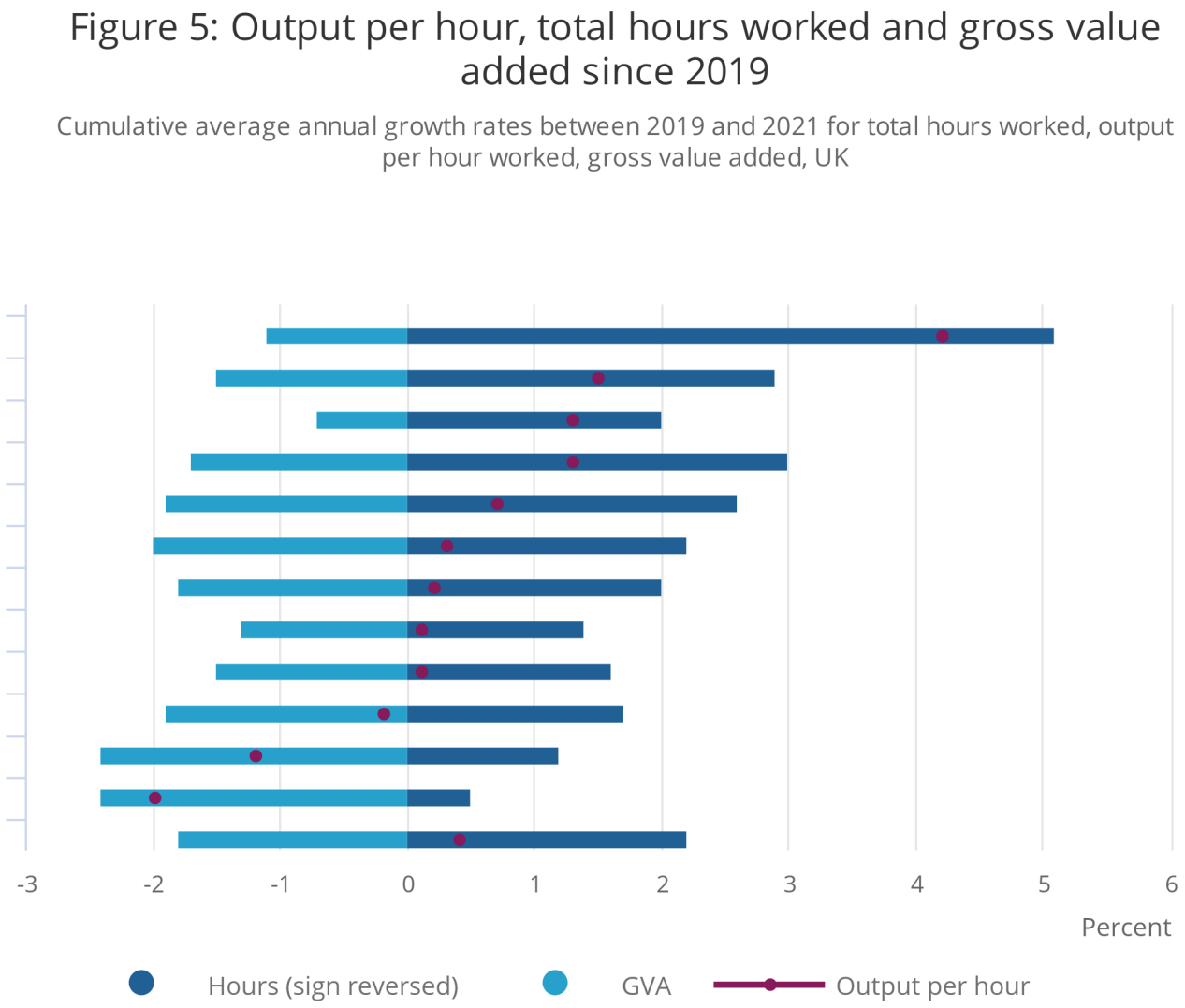
1. The allocation effect includes shifts in the proportion of economic activity across regions, as well as economic activity that cannot be assigned to any specific region.

Growth (Figure 3) can differ greatly from contributions (Figure 4) because of the proportion of hours worked in each region, but when UK growth is small there is little scope for contrast between regional contributions.

Since 2019, UK output per hour worked has grown at a cumulative average annual growth rate of 0.4%. Figure 5 shows Northern Ireland experiencing growth of 4.2% annually, which is the largest of any region, and the North East the largest fall of any region at 2%.

Figure 5: Output per hour, total hours worked and gross value added since 2019

Cumulative average annual growth rates between 2019 and 2021 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 . Regional labour productivity data

Annual regional labour productivity
Dataset PRODBYREG | Released 20 June 2023
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 20 June 2023
Annual output per hour and output per job for the whole economy across 13 regions and nations in the UK.

4 . 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.

5 . 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, which are His Majesty's Forces (HMF) and government-supported trainees (GST). These data come from two principal sources within the Office for National Statistics (ONS): 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.

6 . Strengths and limitations

This release reports labour productivity estimates for 2021 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 experimental statistics 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.

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 the latest Short-Term Employment Survey (STES) data and the Labour Force Survey (LFS) data from the Office for National Statistics (ONS).

7 . Related links

Labour market in the regions of the UK: June 2023
Bulletin | Released 13 June 2023
Regional, local authority and parliamentary constituency breakdowns of changes in UK employment, unemployment, economic inactivity and other related statistics.

Productivity overview, UK: October to December 2022
Bulletin | Released 26 April 2023
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 2021
Bulletin | Released 25 April 2023
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 bulletin

Office for National Statistics (ONS), released 20 June 2023, ONS website, statistical bulletin, Regional labour productivity, UK: 2021