Office for National Statistics

Article

Productivity overview, UK: October to December 2022

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The main findings from official statistics and analysis of UK productivity, presenting a summary of recent developments.

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1 . Main points

- Growth in output per hour worked in Quarter 4 (Oct to Dec) 2022 was flat (0.0%) compared with Quarter 4 2021.

- Output per worker and output per job in Quarter 4 2022 were respectively 0.2% and 0.3% lower than the same quarter a year ago.

- Relative to the same quarter a year ago, construction and administrative service industries had the biggest positive industry contribution to annual productivity growth.

This quarterly bulletin now focuses on labour productivity. Public service productivity estimates are published as a separate bulletin, while multi-factor productivity estimates will be published annually following the UK National Accounts (Blue Book) in October 2023.

2 . Labour productivity

Quarter 4 (Oct to Dec) 2022 completed four quarters without the furlough. Therefore, for the first time in a post-coronavirus (COVID-19) period, we can compare quarter on quarter from a year ago without the distortion of furlough effects.

Output per hour worked, our headline measure of labour productivity, was flat (0.0%) in the four quarters to Quarter 4 2022. Growth in gross value added (GVA) (0.5%) was balanced closely by growth in hours worked (0.6%) over the past year.

Output per worker and output per job were 0.2% and 0.3% below their respective Quarter 4 2021 levels. This is because of higher growth in the number of workers (0.8%) and jobs (0.9%) than in the GVA (0.5%).
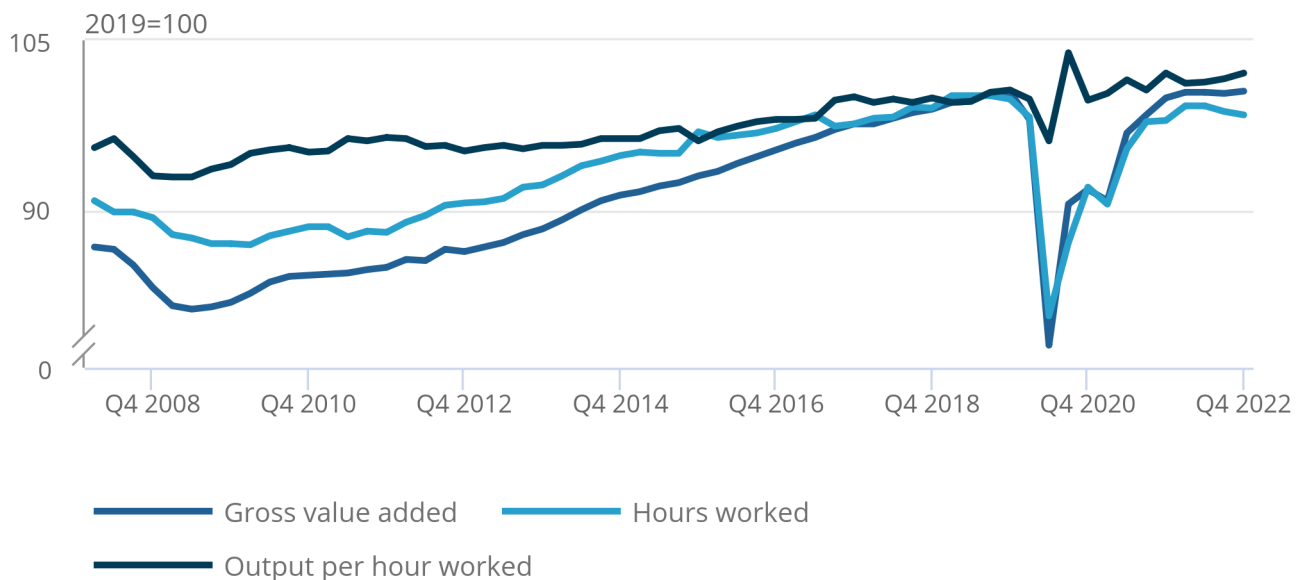
Output per hour worked was 2.1% above its pre-coronavirus pandemic levels (2019 average level) in Quarter 4 2022. This growth was driven by a fall in the number of hours worked (1.6%) and an increase of GVA by 0.5% (see Figure 1) since 2019. Output per worker and output per job were also above their pre-coronavirus pandemic levels, at 0.4% and 0.2% respectively. This was because of a higher increase in GVA (0.5%) compared with the growth in the number of workers (0.0%) and the number of jobs (0.3%).

Figure 1: Output per hour worked was flat in the four quarters to Quarter 4 (Oct to Dec) 2022

Gross value added, hours worked, output per hour worked, UK, index 2019 = 100, Quarter 1 (Jan to Mar) 2008 to Quarter 4 (Oct to Dec) 2022

Figure 1: Output per hour worked was flat in the four quarters to Quarter 4 (Oct to Dec) 2022

Gross value added, hours worked, output per hour worked, UK, index 2019 = 100, Quarter 1 (Jan to Mar) 2008 to Quarter 4 (Oct to Dec) 2022

Source: Productivity overview, UK from Office for National Statistics
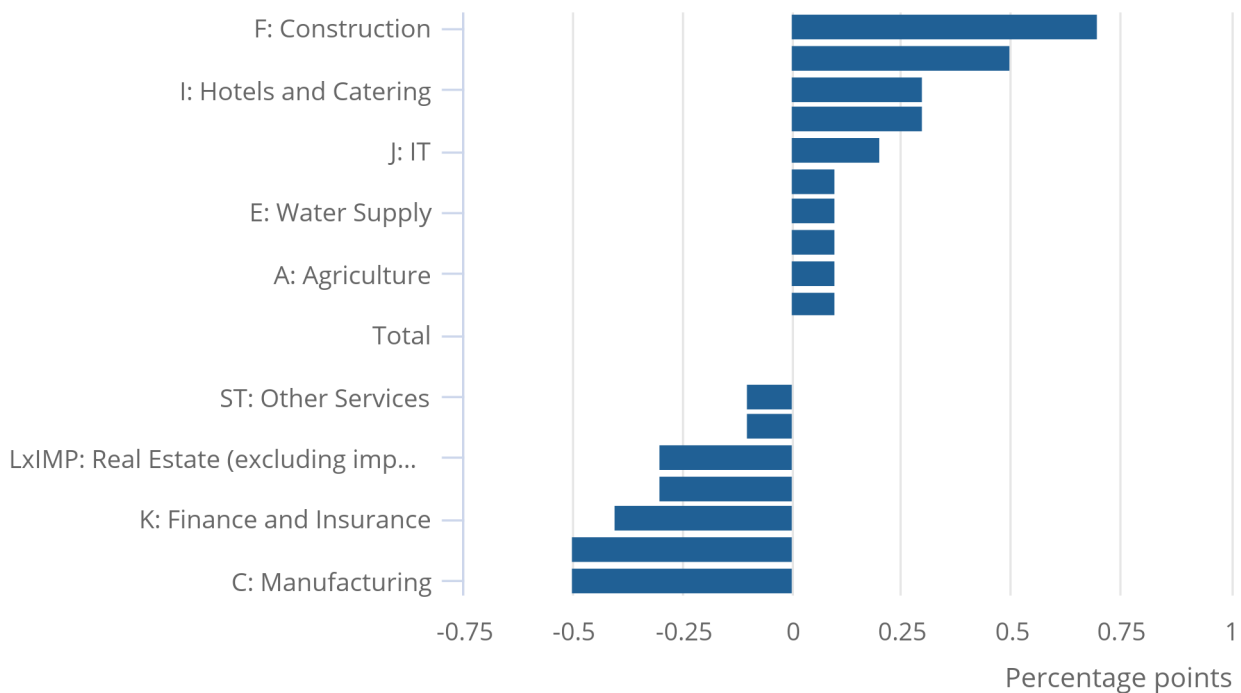
3 . Labour productivity by industry

Figure 2 shows the contribution to annual growth in output per hour worked for 17 industries in Quarter 4 (Oct to Dec) 2022 relative to the same quarter a year ago. Construction and administrative service industries made the biggest positive industry contribution to annual productivity growth. By contrast, manufacturing and wholesale and retail industries detracted from productivity growth. The mining and quarrying industry did not make any contribution to productivity growth over the same period.

Figure 2: Output per hour worked varied across industry, with construction showing the highest contribution over the last four quarters to Quarter 4 2022

Output per hour worked contributions, percentage points, relative to Quarter 4 (Oct to Dec) 2021

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Output per hour worked contributions, percentage points, relative to Quarter 4 (Oct to Dec) 2021

Source: Productivity overview, UK from Office for National Statistics

Notes:

1. Imputed rent is excluded from the real estate industry.

2. The industry contributions may not add up to the output per hour total. This is because of the exclusion of imputed rent from real estate and because of the National Accounts balancing value.
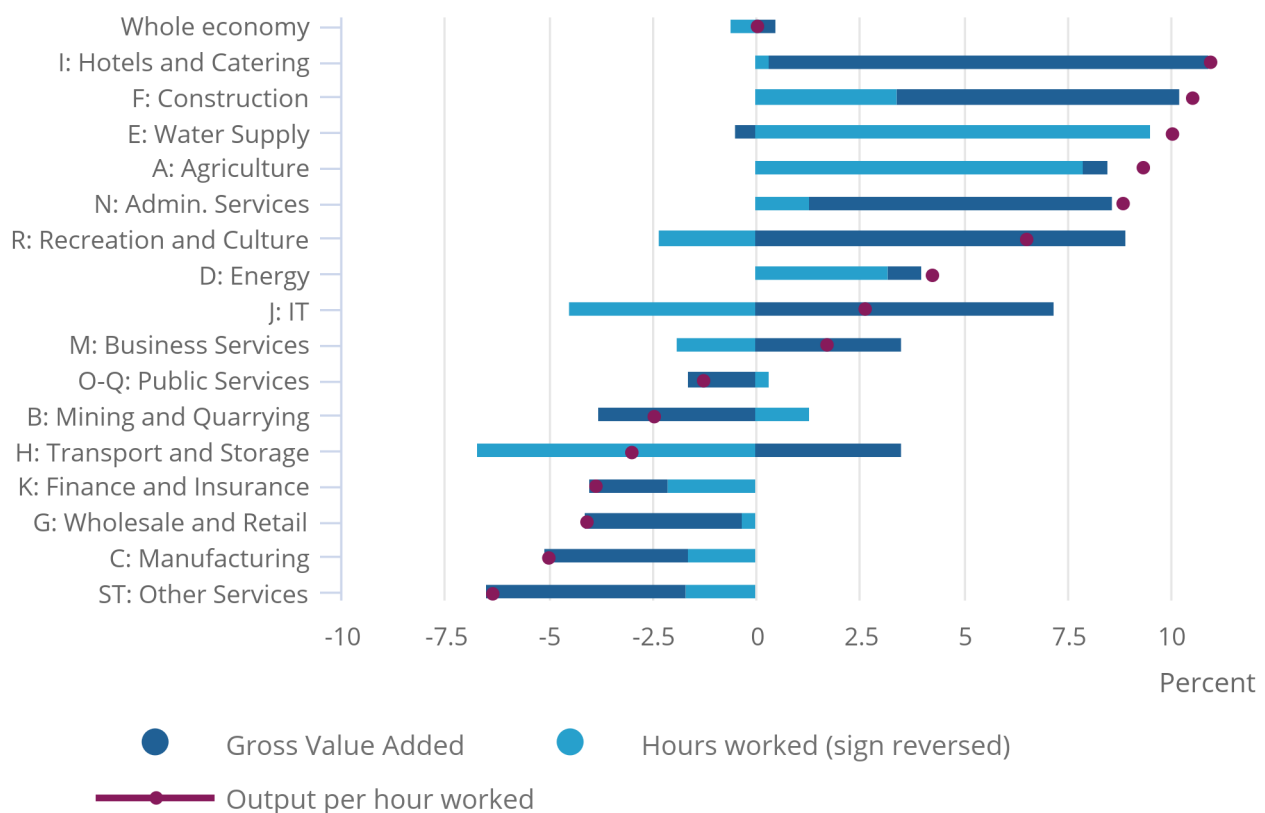
Figure 3 shows that hotels and catering and construction industries saw the largest increase in output per hour worked in Quarter 4 2022 compared with Quarter 4 2021, mainly driven by an increase in gross value added (GVA). Other services (a residual category, including personal service activities not covered elsewhere in the Standard Industrial Classification (SIC) 2007) had the biggest falls in Quarter 4 2022 compared with Quarter 4 2021. This was mainly driven by the decrease in GVA.

Figure 3: Decomposition of labour productivity growth in the four quarters to Quarter 4 (Oct to Dec) 2022

Output per hour worked, hours worked and gross value added, Quarter 4 2022, versus the same quarter a year ago (Quarter 4 2021), percentage change, UK

Source: Productivity overview, UK from Office for National Statistics

Notes:

1. Real estate industry has been excluded.

4 . Productivity overview data

[Output per hour worked, UK](#)
Dataset | Released 26 April 2023
Estimates for gross value added (GVA), hours worked and output per hour worked for whole economy and bespoke-level industries, as defined by the Standard Industrial Classification (SIC) 2007. Contains annual and quarterly statistics. Includes estimates for industry quarter on quarter, year on year and quarter on year contributions to whole economy output per hour worked.

[Output per job, UK](#)
Dataset | Released 26 April 2023
Estimates for gross value added (GVA), jobs and output per job by bespoke, section and division level industry, as defined by the Standard Industrial Classification (SIC) 2007. Contains annual and quarterly statistics. Includes estimates for industry quarter on quarter, year on year and quarter on year contributions to whole economy output per job.

[Output per worker, UK](#)
Dataset | Released 26 April 2023
Estimates for gross value added (GVA), workers, and output per worker by bespoke industries. Contains annual and quarterly statistics.

5 . Glossary

Labour productivity

Labour productivity measures how many units of output are produced for each unit of labour input, and is calculated by dividing output by labour input.

Labour inputs

The preferred measure of labour input is hours worked ("productivity hours"), but workers and jobs ("productivity jobs") are also used.

Output

Output refers to gross value added (GVA), which is an estimate of the volume of goods and services produced by an industry, and in aggregate for the UK.

6 . Measuring the data

Methodological information

Productivity estimates and their inputs are produced to a number of decimal points as reported in the [linked datasets](#). However, within the bulletin we have rounded to one decimal point.

7 . Strengths and limitations

Information on the strengths and limitations of the data, as well as the quality and accuracy of the data, is available in the Labour productivity Quality and Methodology Information (QMI).

We welcome feedback about our publication changes. To help us meet user needs, please email productivity@ons.gov.uk.

8 . Related links

GDP quarterly national accounts, UK: October to December 2022
Bulletin | Released 31 March 2023
Revised quarterly estimate of gross domestic product (GDP) for the UK. Uses additional data to provide a more precise indication of economic growth than the first estimate.

Labour market overview, UK: April 2023
Bulletin | Released 18 April 2023
Estimates of employment, unemployment, economic inactivity, and other employment-related statistics for the UK.

Public service productivity: total, UK, 2019
Article | Released 22 February 2022
Updated measures of output, inputs, and productivity for public services in the UK between 1997 and 2019. Includes service area breakdown, as well as impact of quality adjustment and latest revisions.

UK productivity flash estimate: October to December 2022
Article | Released 14 February 2023
Flash estimate of labour productivity for Quarter 4 (Oct to Dec) 2023 based on the latest data from the gross domestic product (GDP) first quarterly estimate and labour market statistics.

Labour costs and labour income, UK: 2022
Bulletin | Released 13 May 2022
Labour share of income, unit labour costs (ULCs), unit wage costs (UWCs) and average labour compensation per hour worked (ALCH), broken down by industry.

9 . Cite this statistical bulletin

Office for National Statistics (ONS), released 26 April 2023, ONS website, statistical bulletin, Productivity overview, UK: October to December 2022