

Article

Productivity overview, UK: April to June 2023

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



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1 . Main points

Labour productivity

- Incorporating revisions to annual National Accounts, output per hour worked increased by 0.3% in Quarter 2 (Apr to June) 2023 compared with Quarter 2 2022.
- Output per hour worked was 2.8% above its pre-coronavirus (COVID-19) pandemic levels (2019 average level) in Quarter 2 2023.
- Output per worker and output per job in Quarter 2 2023 also rose up 0.2% and 0.4%, respectively, compared with the same quarter a year ago.
- Relative to the same quarter a year ago, the administrative services and construction industries made the biggest upwards contributions to annual productivity growth, while the finance and insurance industry made the biggest negative contribution.

Labour costs and labour income

- Nominal unit labour costs rose by 1.6% in Quarter 2 2023 compared with Quarter 1 (Jan to Mar) 2023, and were 5.8% higher than the same quarter a year ago.

These are preliminary estimates and so they are subject to revision. This quarterly bulletin focuses on labour productivity and labour costs and labour income estimates. 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).

2 . Labour productivity

The gross value added (GVA) time series data used to estimate our productivity measure, taken from our [Gross domestic product \(GDP\) quarterly national accounts, UK: April to June 2023 bulletin](#), have undergone revisions, implemented as part of the [Blue Book 2023 National Accounts changes](#). As such, there may be differences in the labour productivity estimates reported in our [UK productivity flash estimate: April to June 2023 article](#) and our latest [Productivity overview estimates](#).

Furthermore, as we have [explained previously](#), response rates for the Labour Force Survey (LFS) have been falling. For this reason, the Office for National Statistics (ONS) is working to transform the LFS to enhance the quality of productivity and labour market estimates.

We will keep users informed about [future developments of the TLFS](#). Because of the limited LFS response rates, this publication excludes industries A, agriculture, and B, mining and quarrying.

In Quarter 2 (Apr to June) 2023, output per hour worked, our headline measure of labour productivity, was 0.3% higher than the same quarter a year ago. Output per hour worked increased because gross value added (GVA) grew at a higher rate, 0.6% over the last year, than hours worked, 0.3%.

Output per hour worked was 2.8% above its pre-coronavirus (COVID-19) pandemic levels (2019 average level) in Quarter 2 2023. Figure 1 shows that this growth was caused by an increase in GVA of 2.2% since 2019, while the number of hours worked decreased by 0.5% over the period.

Output per worker and output per job were above their equivalent Quarter 2 2022 levels by 0.2% and 0.4%, respectively. This is because of higher growth in GVA of 0.6% than in the number of workers and jobs, which grew by 0.4% and 0.2%, respectively.

Output per worker was 1.8% above its pre-coronavirus-pandemic levels, driven by the growth in GVA of 2.2%, which was higher than the growth in the number of workers of 0.4%.

Output per job was 1.7% above its pre-coronavirus pandemic levels. This was because of higher growth, in GVA of 2.2%, than in the number of jobs, which grew by 0.5%.

Compared with its pre-coronavirus pandemic levels, output per worker grew less than output per hour worked because, on average, workers did fewer hours work per week in Quarter 2 (Apr to June) 2023 than in 2019. Similarly, output per job grew less than output per worker because more workers are now doing second jobs.

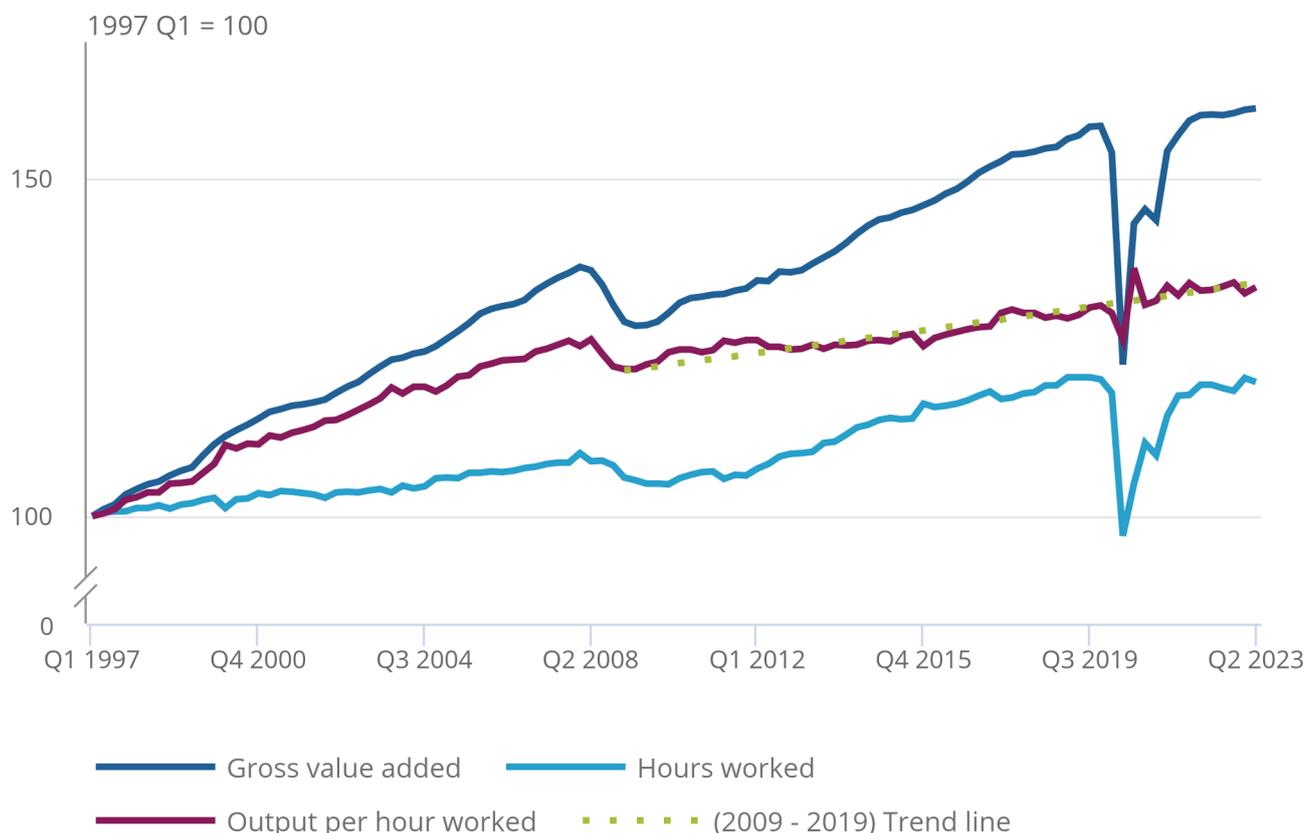
Figure 1 shows that the new revised data suggest that, while the coronavirus pandemic had a significant short-term effect on the growth rate of productivity, unlike most "standard" recessions (such as the financial crisis in 2008 to 2009) which demonstrate a subsequent fall in productivity, the trend rate has been unaffected when taken from 2009 onwards. Since this trend was historically weak and recognised as the "productivity puzzle", this suggests that underlying weakness in the drivers of productivity growth remain.

Figure 1: Output per hour worked was 0.3% higher than a year ago, and 2.8% higher than in 2019

Gross value added, hours worked, output per hour worked, UK, index 1997 Q1 = 100, Quarter 1 (Jan to Mar) 1997 to Quarter 2 (Apr to June) 2023

Figure 1: Output per hour worked was 0.3% higher than a year ago, and 2.8% higher than in 2019

Gross value added, hours worked, output per hour worked, UK, index 1997 Q1 = 100, Quarter 1 (Jan to Mar) 1997 to Quarter 2 (Apr to June) 2023



Source: Productivity overview, UK from the Office for National Statistics

Notes:

1. The Output per hour trendline is constructed by calculating the average growth between Quarter 2 2009 (the GVA low point of the 2008 economic downturn) and Quarter 4 2019 (the GVA high point before the coronavirus pandemic).

Please note that the coronation of King Charles III on 6 May 2023 led to an additional bank holiday on Monday 8 May. This should be considered when interpreting the variation in hours worked in Quarter 2 2023 and the comparison with the previous quarter (Quarter 1 2023). The Queen’s Platinum Jubilee also led to an additional bank holiday on Friday 3 June 2022, and this should also be considered when interpreting the variation in hours worked between Quarter 2 2023 and the same quarter a year ago (Quarter 2 2022).

3 . Labour productivity by industry

Figure 2 shows the contribution to annual growth in output per hour worked for 15 industries in Quarter 2 (Apr to June) 2023 relative to the same quarter a year ago.

Administrative service and construction industries made the biggest upwards industry contributions to annual productivity growth. By contrast, finance and insurance made the biggest negative contribution to productivity growth. The hotel and catering industry did not make any substantive contribution to productivity growth over the same period.

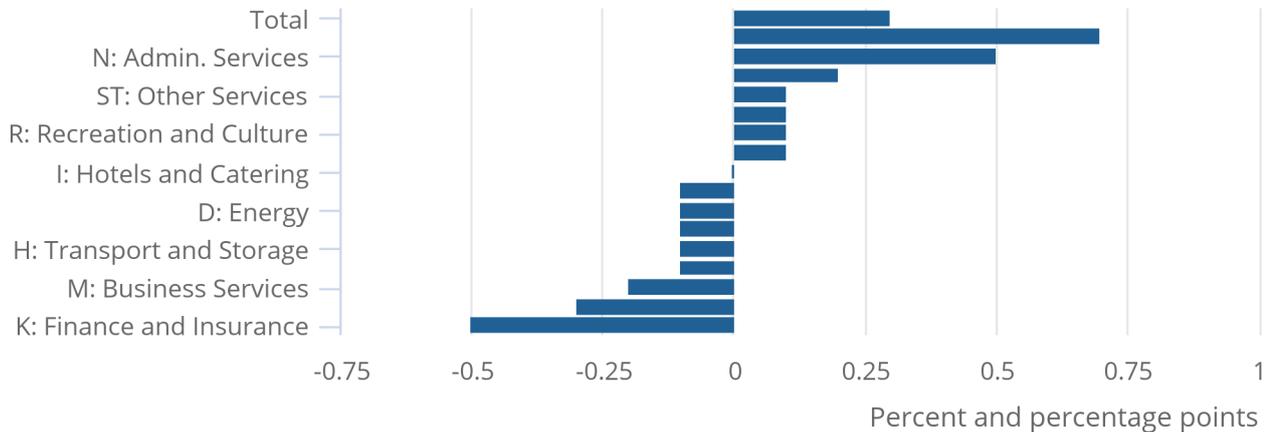
Whole-economy growth in productivity is affected by reallocation of economic activity between industries (the between-industry effect). The between-industry reallocation made a positive contribution to productivity growth over the past year, showing that on average, economic activity tended to shift from industries with lower productivity to industries with higher productivity.

Figure 2: Administrative services made the biggest upwards contribution over the last year

Contribution to growth of output per hour worked, percentage points, relative to Quarter 2 (Apr to June) 2022

Figure 2: Administrative services made the biggest upwards contribution over the last year

Contribution to growth of output per hour worked, percentage points, relative to Quarter 2 (Apr to June) 2022



Source: Productivity overview, UK from the Office for National Statistics

Notes:

1. [Imputed rental](#) is excluded from the real estate industry.
2. Response rates for the Labour Force Survey have been falling. As a consequence, this quarter, we have excluded Agriculture (A) and Mining and Quarrying (B) industries.
3. The industry contributions may not add up to the total growth in output per hour. This is because of the exclusion of Agriculture (A), Mining and Quarrying (B) Industries, and [imputed rental](#) from real estate. Also, because of the National Accounts balancing value and the impact of rounding.
4. O-Q public services industry includes: public administration and defence, compulsory social security, education, human health, and social work activities that may contain some element of the market sector.
5. Other services industry includes: personal service activities not covered elsewhere in our [Standard Industrial Classification \(SIC\) 2007](#).

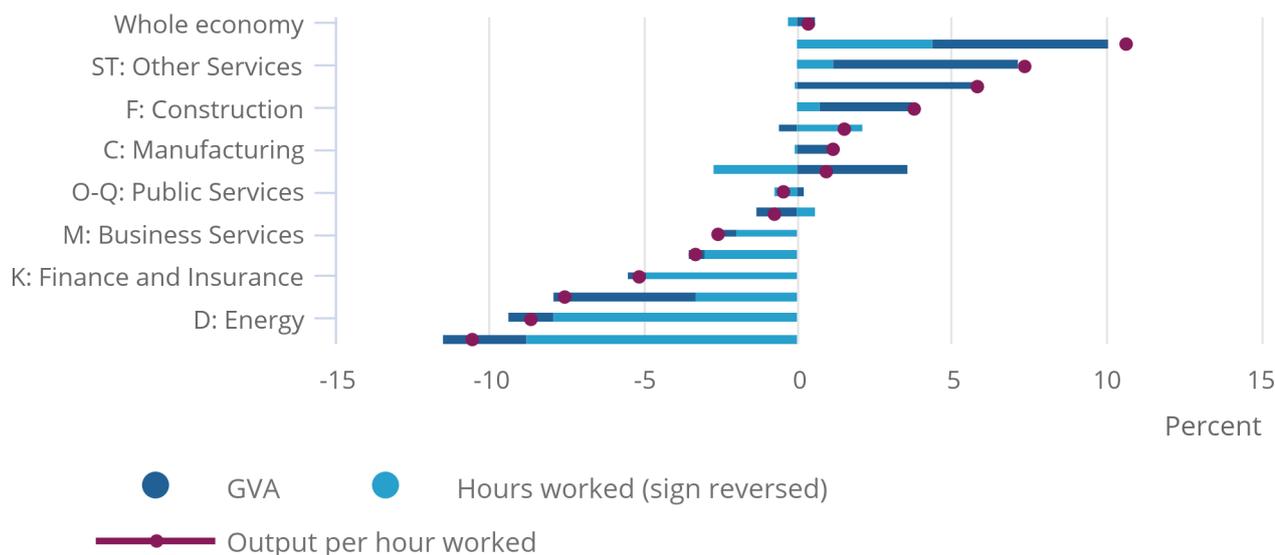
Figure 3 shows the decomposition of growth of output per hour worked. In administrative services, growth in output per hour worked was caused by an increase in gross value added (GVA) and a fall in hours worked.

Figure 3: Administrative services saw the biggest growth in output per hour worked over the last year

Decomposition of growth of output per hour worked, hours worked and gross value added, Quarter 2 (Apr to June) 2023 versus the same quarter a year ago (Quarter 2 2022), percentage change, UK

Figure 3: Administrative services saw the biggest growth in output per hour worked over the last year

Decomposition of growth of output per hour worked, hours worked and gross value added, Quarter 2 (Apr to June) 2023 versus the same quarter a year ago (Quarter 2 2022), percentage change, UK



Source: Productivity overview, UK from the Office for National Statistics

Notes:

1. Imputed rental is excluded from the real estate industry.
2. Water supply data reflects re-classification of some entities out of this industry in the last year, so growth in output per hour for this industry should be interpreted with caution.
3. Response rates for the Labour Force Survey have been falling. As a consequence, this quarter we have excluded Agriculture (A) and Mining and Quarrying (B) industries.

4 . Labour costs and labour income

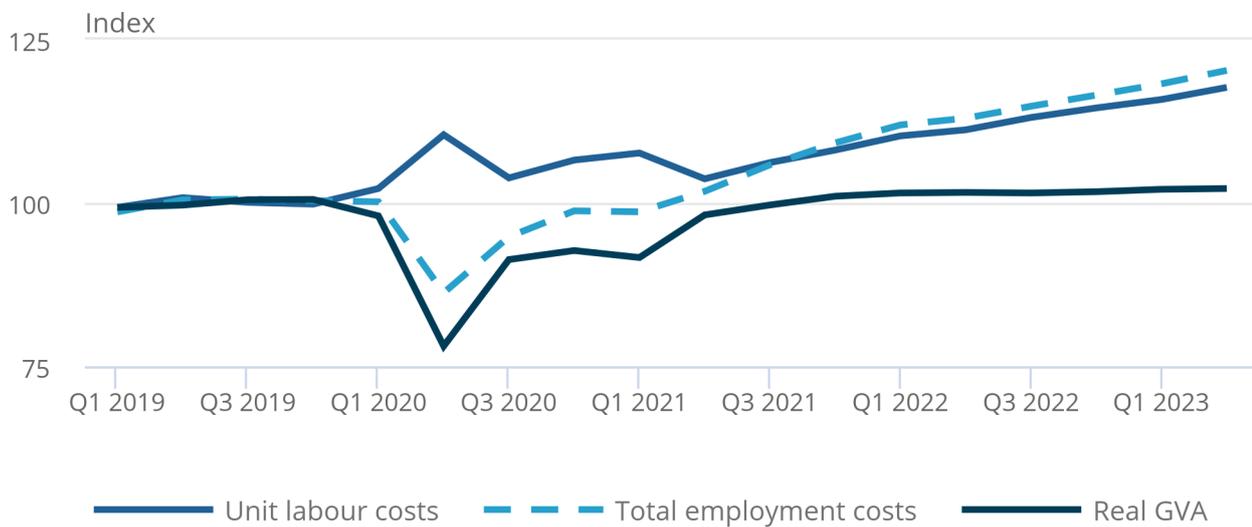
Total employment costs (TEC) grew 1.7% in quarter 2 (Apr to June) 2023 when compared with quarter 1 (Jan to Mar) 2023. The growth in TEC was stronger than the 0.1% growth in real gross value added for the same period resulting in nominal unit labour costs (ULC) growing 1.6% in quarter 2 2023. When compared to quarter 2 2022, ULCs increased by 5.8%

Figure 4: Unit labour costs continued to grow in Quarter 2 (Apr to June) 2023

Unit labour costs, total employment cost, real gross value added, UK, index 2019 = 100, Quarter 1 (Jan to Mar) 2019 to Quarter 2 (Apr to June) 2023

Figure 4: Unit labour costs continued to grow in Quarter 2 (Apr to June) 2023

Unit labour costs, total employment cost, real gross value added, UK, index 2019 = 100, Quarter 1 (Jan to Mar) 2019 to Quarter 2 (Apr to June) 2023



Source: Productivity overview, UK from the Office for National Statistics

5 . Productivity overview data

[Output per hour worked, UK](#)

Dataset | Released 24 October 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 24 October 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. Contains estimates for industry quarter on quarter, year on year and quarter on year contributions to output per job.

[Output per worker, UK](#)

Dataset | Released 24 October 2023

Estimates for gross value added (GVA), workers, and output per worker by bespoke industries. Contains annual and quarterly statistics.

[Labour costs and labour income, UK](#)

Dataset | Released 24 October 2023

Unit labour cost, average labour compensation per hour worked, labour share and unit wage cost for the whole UK economy, and unit wage cost for manufacturing.

6 . 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.

Total employment costs

Total employment costs represent the total costs of purchasing labour in the economy, not including any such costs funded by employment subsidies.

Unit labour costs (nominal)

Unit labour costs (ULCs) measure the nominal cost of labour input per unit of real (inflation-adjusted) economic output.

7 . Measuring the data

Methodological information

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

8 . Strengths and limitations

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

In our labour costs and labour income dataset, we use estimates from the UK National Accounts that are periodically revised to account for updated data, new methods and new data sources. Therefore, please take these revisions into account if you are using these data for contract negotiations or prices.

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

9 . Related links

[GDP quarterly national accounts, UK: April to June 2023](#)

Bulletin | Released 29 September 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: September 2023](#)

Bulletin | Released 12 September 2023

Estimates of employment, unemployment, economic inactivity, and other employment-related statistics for the UK.

[Public service productivity, quarterly, UK: April to June 2023](#)

Bulletin | Released 13 October 2023

Experimental estimates for UK total public service productivity, inputs and output to provide a short-term, timely indicator of the future path of the annual productivity estimates.

[UK productivity flash estimate: April to June 2023](#)

Article | Released 15 August 2023

Labour productivity for Quarter 2 (April to June) 2023 based on 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.

10 . Cite this article

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