Office for National Statistics

Article

UK productivity flash estimate: January to March 2023

Labour productivity for Quarter 1 (January to March) 2023 based on data from the gross domestic product (GDP) first quarterly estimate and labour market statistics.

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1 . Main points

- In Quarter 1 (Jan to Mar) 2023, preliminary estimates of UK output per hour worked were 0.6% below the same quarter a year ago, the weakest annual growth since 2013, excluding the coronavirus (COVID-19) pandemic.
- In Quarter 1 2023, preliminary estimates of UK output per worker were 0.9% lower than the same quarter a year ago, and it remained unchanged compared with the period immediately before the coronavirus pandemic.
- Relative to the same quarter a year ago, the administrative services industry had the biggest positive industry contribution to annual productivity growth.
- Relative to the same quarter a year ago, the real estate, public services, wholesale and retail and finance and insurance industries made negative contributions to annual productivity growth.

These are preliminary estimates based on first quarterly estimates of gross value added, which can be volatile. Estimates may be revised when we release our more detailed Productivity overview article for the quarter.

2 . Latest statistics

The labour productivity flash estimate uses the latest labour market statistics, detailed in our Labour market overview bulletin and the gross value added (GVA) first quarterly estimates to provide the first look at UK productivity for Quarter 1 (Jan to Mar) 2023.

In our UK productivity flash estimate: October to December 2022 article, we compared UK productivity with average 2019 levels to capture the effect of the furlough schemes on productivity growth. We can now compare Quarter 1 2023 to the same quarter from a year ago without the distortion of the furlough effect.

This publication covers two measures of labour productivity: output per hour worked and output per worker. Details of these measures are below.

Table 1: The latest productivity statistics
UK, Quarter 1 (Jan to Mar) 2022 to Quarter 1 (Jan to Mar) 2023

	Output per hour worked growth rates			Output per worker growth rates		
Period	**Quarter vs 2019 pre-pandemic level (%)**	**Quarter-on-year ago (%)**	**Quarter-on-quarter (%)**	**Quarter vs 2019 pre-pandemic level (%)**	**Quarter-on-year ago (%)**	**Quarter-on-quarter (%)**
2022 Q1	1.2	0.9	-0.8	0.9	9.0	0.3
2022 Q2	1.3	-0.2	0.0	0.4	2.2	-0.5
2022 Q3	1.6	1.0	0.4	0.5	1.5	0.1
2022 Q4	2.1	0.0	0.4	0.4	-0.2	-0.1
2023 Q1	0.6	-0.6	-1.4	0.0	-0.9	-0.4

Source: UK productivity flash estimate from the Office for National Statistics

Notes

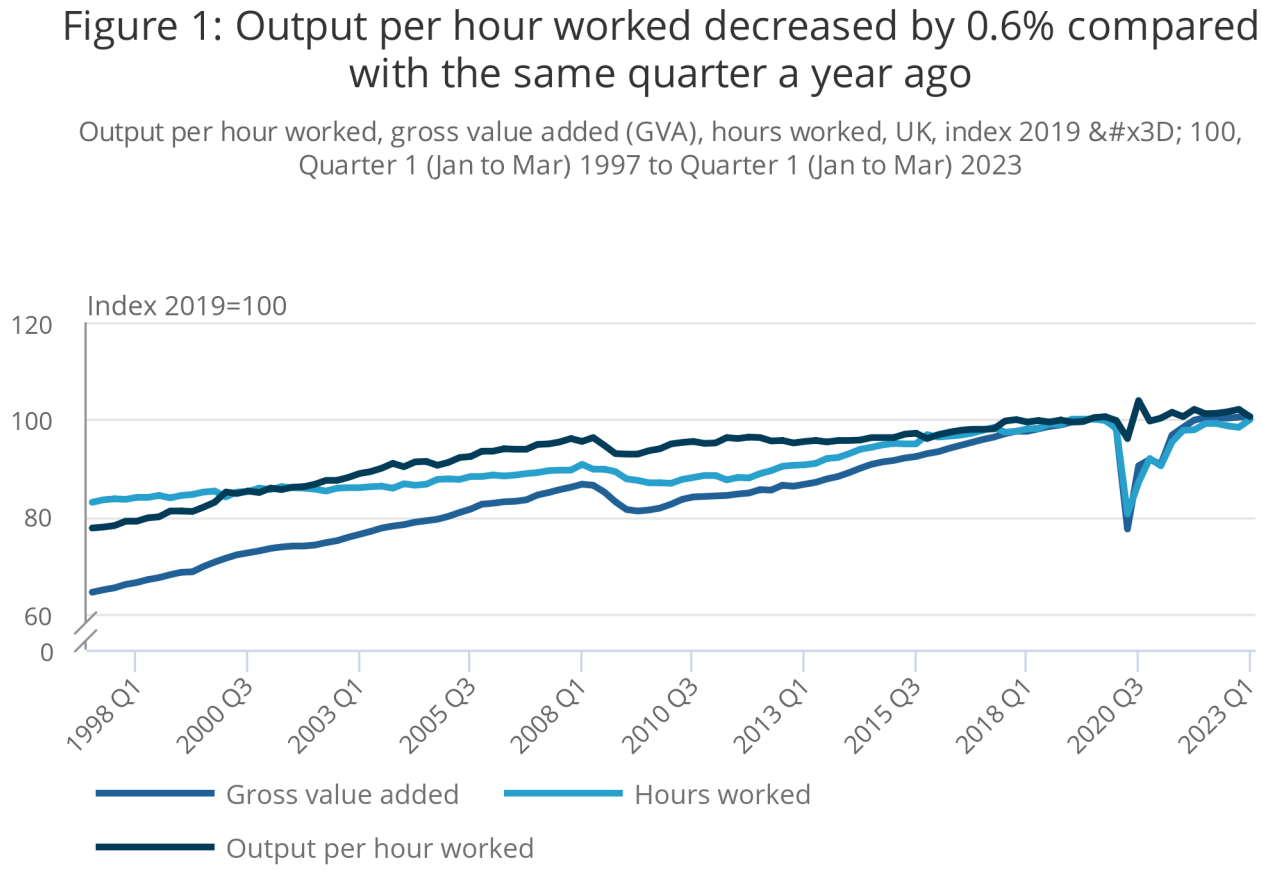
1. Comparisons with pre-coronavirus (COVID-19) pandemic levels use average 2019 levels as the base period.

3 . Output per hour worked

Preliminary estimates of UK output per hour worked for Quarter 1 (Jan to Mar) 2023 decreased by 0.6% relative to a year earlier, Quarter 1 2022. This is the largest fall since Quarter 1 2013, excluding the coronavirus (COVID-19) pandemic period. GVA grew by 0.2%, while the number of hours worked grew by 0.8%.

Figure 1: Output per hour worked decreased by 0.6% compared with the same quarter a year ago

Output per hour worked, gross value added (GVA), hours worked, UK, index 2019 = 100, Quarter 1 (Jan to Mar) 1997 to Quarter 1 (Jan to Mar) 2023



Source: UK productivity flash estimate from the Office for National Statistics

UK output per hour worked decreased by 1.4% in Quarter 1 2023 compared with the previous quarter. This was driven by a quarterly increase in the GVA (0.1%), and a bigger increase in the number of hours worked (1.6%). The number of hours worked was lower than the trend in Quarter 4 (Oct to Dec) 2022, so the growth in Quarter 1 2023 was more pronounced than the trend movement.

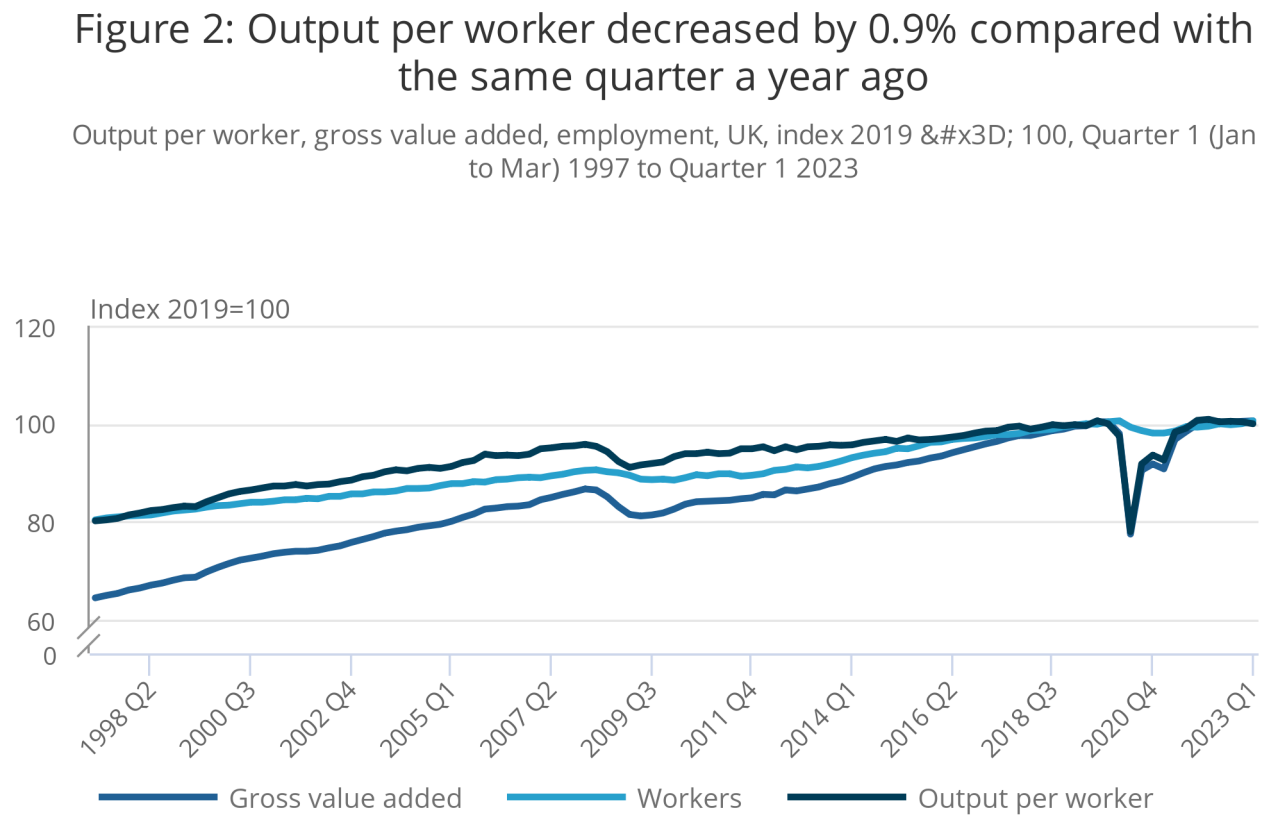
4 . Output per worker

We also report output per worker as a measure of productivity. This is the ratio of total output relative to the number of workers.

Preliminary estimates of UK output per worker for Quarter 1 (Jan to Mar) 2023 decreased by 0.9%, relative to a year earlier. Meanwhile, the 1.1% growth in the number of workers exceeded the 0.2% growth in GVA.

Figure 2: Output per worker decreased by 0.9% compared with the same quarter a year ago

Output per worker, gross value added, employment, UK, index 2019 = 100, Quarter 1 (Jan to Mar) 1997 to Quarter 1 2023



Source: UK productivity flash estimate from the Office for National Statistics

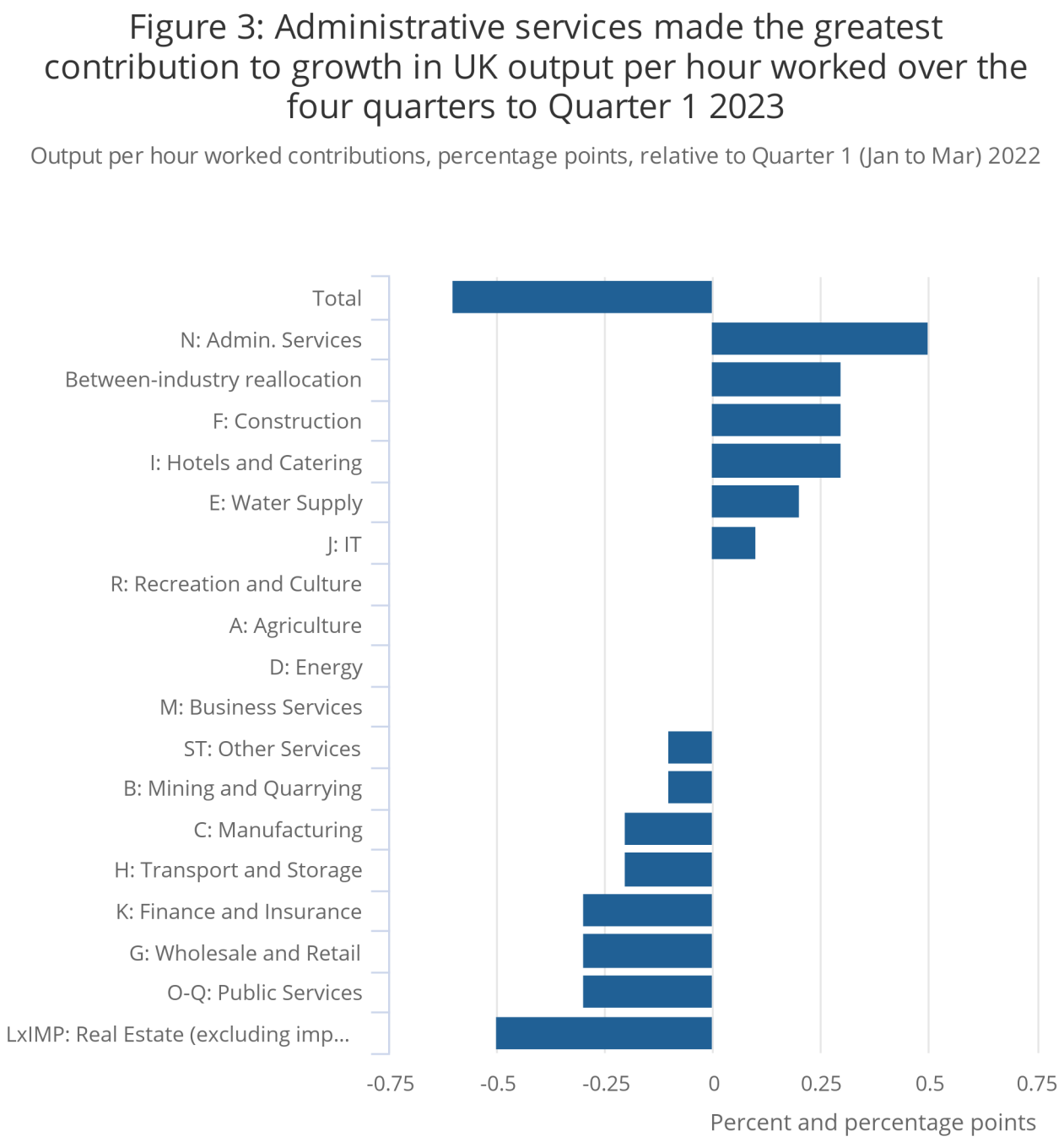
UK output per worker fell by 0.4% in Quarter 1 2023 compared with the previous quarter. This was driven by a quarterly increase in the GVA (0.1%), and a bigger increase in the number of workers (0.6%).

5 . Output per hour worked by industry

Figure 3 shows the contribution to growth in output per hour worked for 17 industries in Quarter 1 (Jan to Mar) 2023 relative to the same quarter a year ago. The administrative services industry made the biggest positive industry contribution to productivity growth. By contrast, the real estate, public services, wholesale and retail, and finance and insurance industries detracted from productivity growth. The recreation and culture, agriculture, energy, and business services made negligible contribution to productivity growth over the same period.

Figure 3: Administrative services made the greatest contribution to growth in UK output per hour worked over the four quarters to Quarter 1 2023

Output per hour worked contributions, percentage points, relative to Quarter 1 (Jan to Mar) 2022



Source: UK productivity flash estimate from the 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.

3. The between-industry reallocation measure accounts for changes in the distribution of activity between industries within the economy.

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.

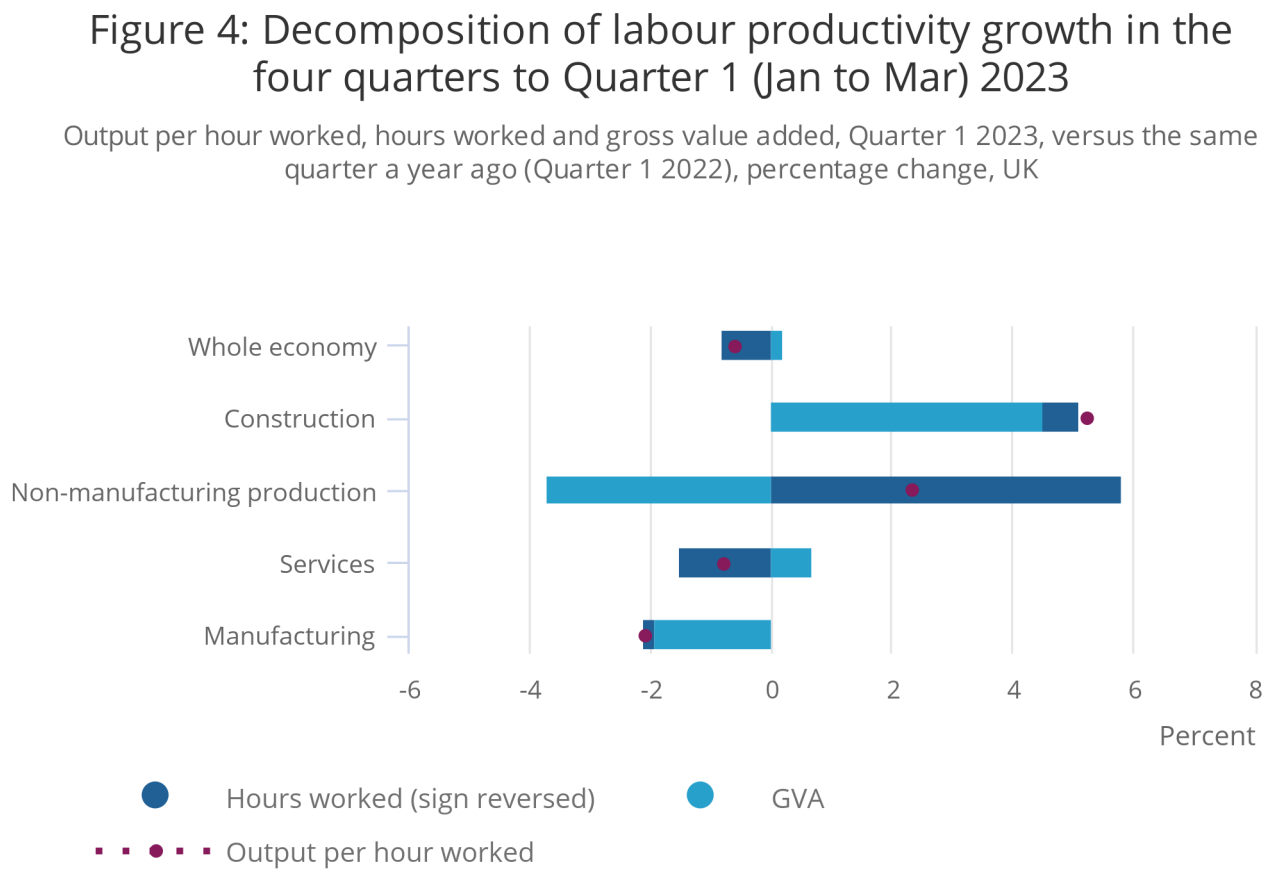
Figure 4 shows the UK economy split into four broadly defined industries:

- construction
- non-manufacturing production
- manufacturing
- services

Output per hour worked in Quarter 1 2023 increased in construction and non-manufacturing production industries compared with the same quarter a year ago (Quarter 1 2022). Meanwhile, it decreased in manufacturing and services compared with the same period.

Figure 4: Decomposition of labour productivity growth in the four quarters to Quarter 1 (Jan to Mar) 2023

Output per hour worked, hours worked and gross value added, Quarter 1 2023, versus the same quarter a year ago (Quarter 1 2022), percentage change, UK



Source: UK productivity flash estimate from the Office for National Statistics

6 . UK productivity flash estimate data

Flash productivity by section
Dataset | Released 16 May 2023
Flash estimates of labour productivity by section. The latest data from the gross domestic product (GDP) first quarterly estimate and labour market statistics.

7 . Glossary

Gross value added (GVA)

The value generated by any unit engaged in production and the contributions of individual sectors or industries to gross domestic product.

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 or jobs ("productivity jobs") are sometimes used.

Output

Output is measured by GVA in chained volume measures (CVM), which is an estimate of the volume of goods and services produced for final use by an industry, and in aggregate for the UK, after adjusting for price changes. It is calculated as turnover (sales) minus purchases (intermediate consumption).

Allocation effect

An allocation effect represents changes in the mix of activities in the economy between firms or industries that have various levels of productivity. Resources moving from low to high productivity industries creates a positive allocation effect, while movement from high to low productivity industries creates a negative allocation effect.

8 . Data sources and quality

This release uses the first available information on output and labour input for Quarter 1 (Jan to Mar) 2023. These data may be revised when we release the more detailed Productivity overview article in July 2023.

This release uses gross value added (GVA) from our GDP first quarterly estimate bulletin to determine output. Labour market data are from the Labour market overview statistical bulletin. Estimates of the productivity time series for previous time periods have been revised and therefore may not be consistent with the labour productivity national statistics.

New estimates of GVA are more volatile on a quarterly basis, especially in production industries. This reflects the use of new data and methods, but also challenges in reconciling quarterly and annual data, as explained in our Recent challenges of balancing the three approaches of GDP article. As productivity is a structural feature of the economy, we continue to advise users to focus on long-term trends of productivity.

The population totals used for the latest Labour Force Survey (LFS) estimates use projected growth rates from Real Time Information data for UK, EU and non-EU populations based on 2021 patterns. The total population used for the LFS therefore does not account for any changes in migration, birth rates, death rates, and so on, since June 2021. As such, any levels estimates may be under-or over-estimating the true values and should be used with caution. Estimates of rates will, however, be robust.

More details on the flash by industry methodology is described in the “Guidance” tab of our Flash productivity by section dataset and the Labour productivity quality and methodology information (QMI) that will be updated and published in the following weeks.

9 . Related links

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.

GDP first quarterly estimate, UK: January to March 2023
Bulletin | Released 12 May 2023
First quarterly estimate of gross domestic product (GDP). Contains current and constant price data on the value of goods and services to indicate the economic performance of the UK.

Labour market overview, UK: May 2023
Bulletin | Released 16 May 2023
Estimates of employment, unemployment, economic inactivity, and other employment-related statistics for the UK.

10 . Cite this article

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