

Article

Productivity flash estimate and overview, UK: January to March 2024 and October to December 2023

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.



Contact:
Productivity team
productivity@ons.gov.uk
+44 1633 582563

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1 . Main points

Flash estimates of labour productivity for Quarter 1 (January to March) 2024

- Preliminary estimates based on the Labour Force Survey (LFS) indicate output per hour worked increased by 0.1% in Quarter 1 (Jan to Mar) 2024 compared with the same quarter a year ago.
- Preliminary estimates of output per worker indicate an increase by 0.8% in Quarter 1 2024 compared with the same quarter a year ago.
- The preliminary estimates of output per hour and output per worker increased by 1.7% and 1.5%, respectively, when compared with pre-coronavirus (COVID-19) pandemic levels (2019 average level).

2 . Flash estimates of labour productivity for Quarter 1 (January to March) 2024

As reported in our recent [Labour market transformation update](#), the weighting for the Labour Force Survey (LFS) is being considered in order to reflect the most up-to-date population and migration data. The results in this publication for Quarter 1 (Jan to Mar) 2024, while consistent with labour market data from our [Labour market overview, UK: May 2024](#), should be considered in the light of this and alternative sources of labour market data. It should also be noted that, as migration may affect the composition of the labour force, there may be corresponding impacts on measures of average hours.

Given these caveats, in Quarter 1 2024, output per hour worked, our headline measure of labour productivity, was 0.1% higher than the same quarter a year ago. Output per hour worked increased because gross value added (GVA) increased by more (0.2%) than hours worked (0.1%) compared with the same quarter a year ago.

Output per hour worked was 1.7% above its pre-coronavirus (COVID-19) pandemic levels (2019 average level) in Quarter 1 2024. This growth was caused by an increase in GVA of 2.0% since 2019, while the number of hours worked increased by 0.3% over the period, shown in Figure 1.

Table 1: Flash estimates of labour productivity
UK, Quarter 1 (Jan to Mar) 2023 to Quarter 1 (Jan to Mar) 2024

Period	Output per hour worked growth rates			Output per worker growth rates		
	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 (%)
Q1 2023	1.6	-0.4	-0.6	0.7	-1.0	-0.2
Q2 2023	2.2	0.2	0.6	0.8	-0.4	0.1
Q3 2023	3.0	0.5	0.7	0.8	-0.4	0.1
Q4 2023	2.0	-0.3	-0.9	0.3	-0.6	-0.5
Q1 2024	1.7	0.1	-0.3	1.5	0.8	1.2

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

Notes

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

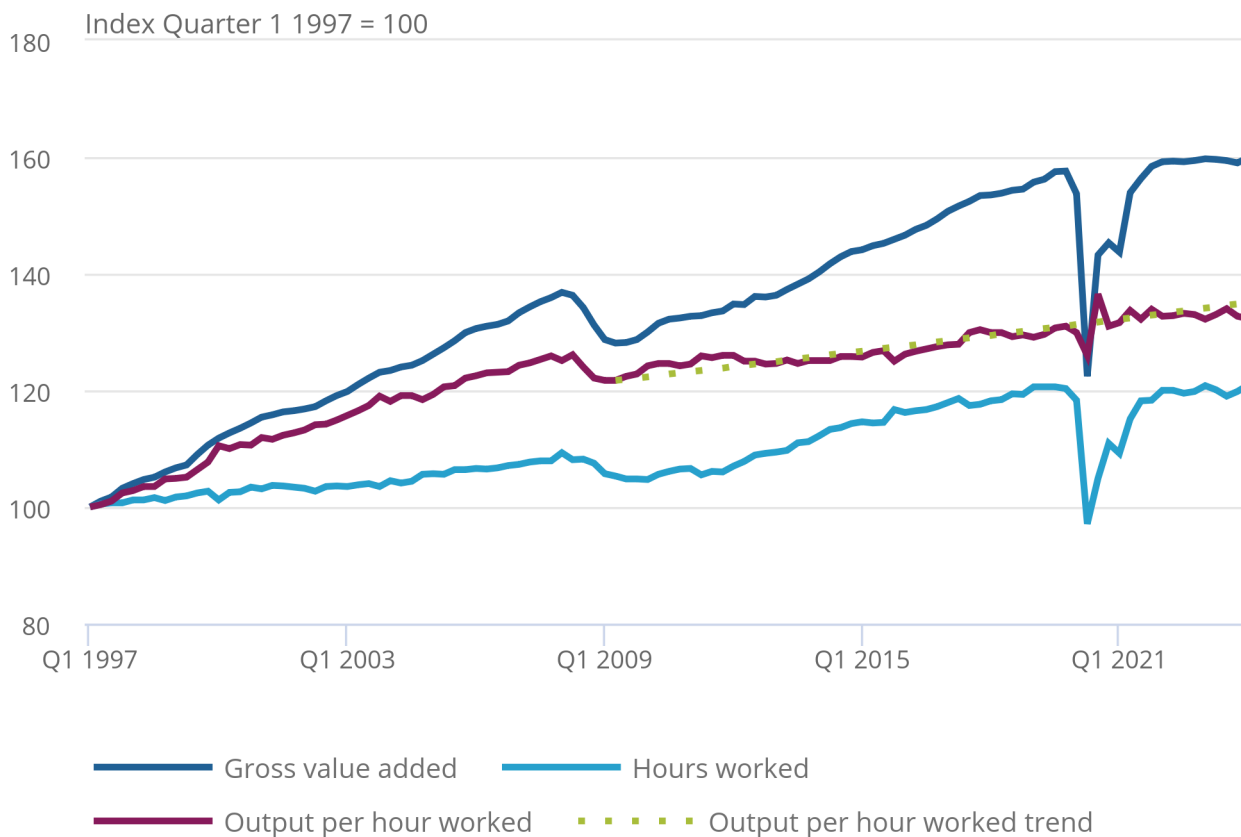
While the pandemic had a significant short-term effect on the growth rate of productivity, unlike most “standard” recessions that show a subsequent fall in productivity (such as the financial downturn in 2008 to 2009), the growth rate bounced back to the trend rate. In more recent quarters, however, it has slowed and begun to diverge from the trend extrapolated from the 2009 to 2019 period, shown in Figure 1. This latter trend was historically weak and recognised as the “productivity puzzle”. The recent movements in productivity since the pandemic suggest this underlying weakness in UK productivity growth remains.

Figure 1: Output per hour worked was 0.1% higher than a year ago

Gross value added, hours worked, output per hour worked, UK, index Q1 1997 = 100, Quarter 1 (Jan to Mar) 1997 to Quarter 1 (Jan to Mar) 2024

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Gross value added, hours worked, output per hour worked, UK, index Q1 1997 = 100, Quarter 1 (Jan to Mar) 1997 to Quarter 1 (Jan to Mar) 2024



Source: Productivity flash estimate and 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 (April to June) in 2009 (the GVA low point of the 2008 economic downturn) and Quarter 4 (October to December) in 2019 (the GVA high point before the coronavirus (COVID-19) pandemic).

Output per worker was 0.8% above its equivalent in Quarter 1 2023, shown in Figure 2. This is because GVA increased by 0.2%, while the number of workers, as measured by the LFS, fell by 0.6%.

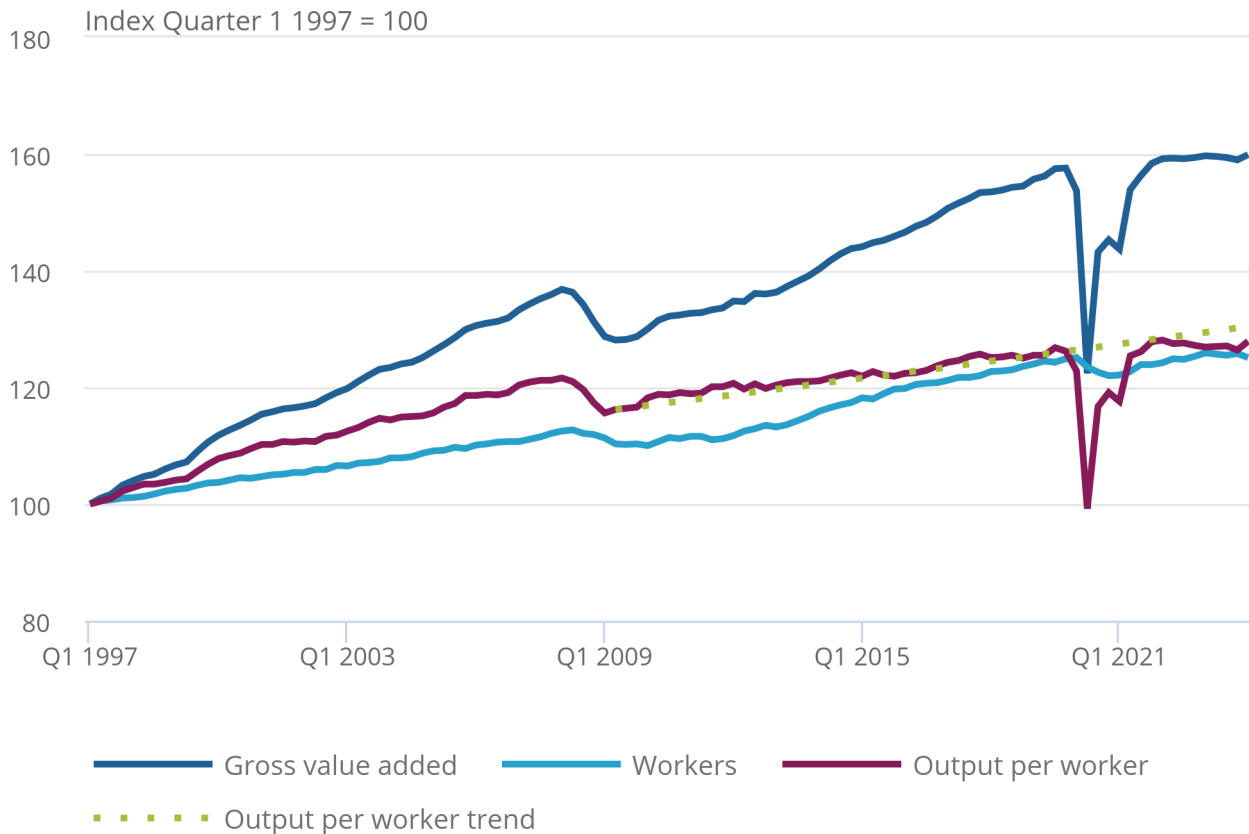
Output per worker was 1.5% above its pre-coronavirus level. This was caused by the growth in GVA of 2.0% being higher than the growth in the LFS number of workers of 0.5%.

Figure 2: Output per worker was 0.8% higher in Quarter 1 2024 than a year ago

Output per worker, gross value added, employment, UK, index Q1 1997 = 100, Quarter 1 (Jan to Mar) 1997 to Quarter 1 (Jan to Mar) 2024

Figure 2: Output per worker was 0.8% higher in Quarter 1 2024 than a year ago

Output per worker, gross value added, employment, UK, index Q1 1997 = 100, Quarter 1 (Jan to Mar) 1997 to Quarter 1 (Jan to Mar) 2024



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

3 . Labour productivity by industry section for Quarter 4 (October to December) 2023

The contribution to growth in output per hour worked for 19 industries in Quarter 4 (Oct to Dec) 2023, relative to the same quarter a year ago, is shown in Figure 3.

The manufacturing industry made the largest upward contribution to productivity growth over the last four quarters. By contrast, over the same period, the business services industry made the largest negative contribution to productivity growth. The transport and storage, energy, real estate, construction, and hotels and catering industries did not make any substantive contribution to productivity growth over the same period.

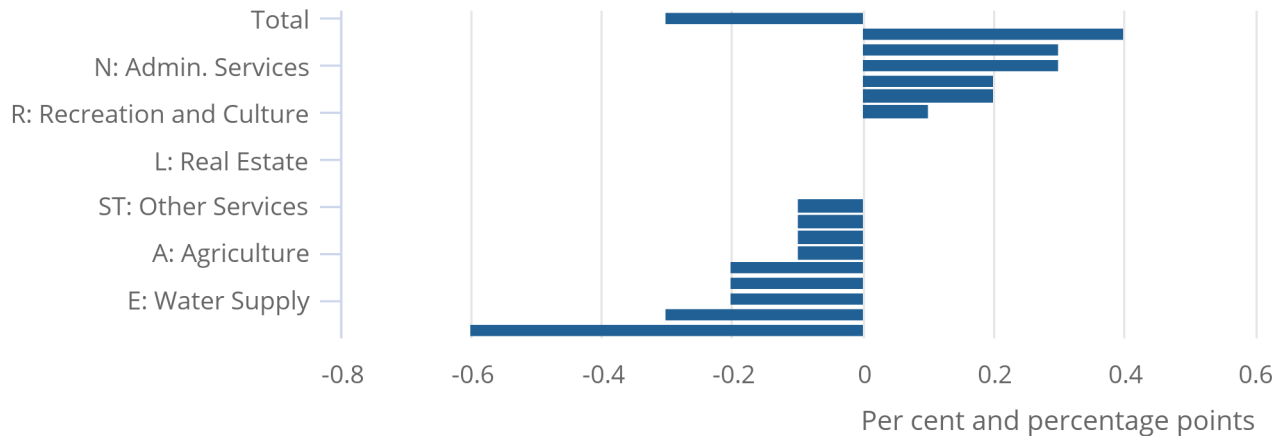
Whole-economy growth in productivity is affected by reallocation of economic activity between industries (the between-industry effect). The between-industry reallocation made a negative contribution to productivity growth over the past year, showing that, on average, economic activity tended to shift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

Figure 3: The manufacturing industry made the biggest upward contribution over the last year

Contribution to growth of output per hour worked, percentage points, relative to Quarter 4 (Oct to Dec) 2022

Figure 3: The manufacturing industry made the biggest upward contribution over the last year

Contribution to growth of output per hour worked, percentage points, relative to Quarter 4 (Oct to Dec) 2022



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

Notes:

1. Imputed rental is excluded from the real estate industry and the total.
2. The industry contributions may not add up to the total growth in output per hour. This is due to the National Accounts balancing value and the impact of rounding.
3. "Other services" industry includes: activities of households as employers, undifferentiated goods and services producing activities of households for own use, activities of membership organisations, repair of computers and personal and household goods and a variety of personal service activities not covered elsewhere in our [Standard Industrial Classification \(SIC\) 2007](#).

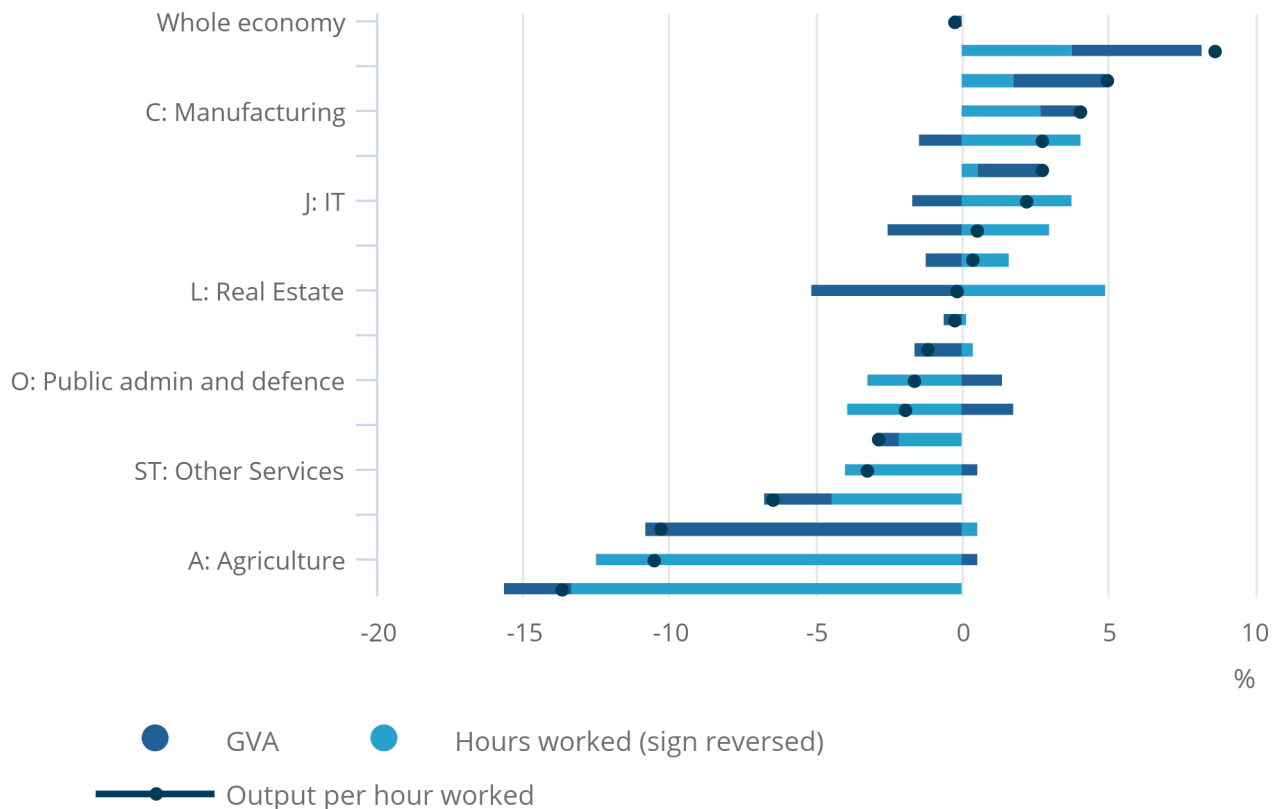
The decomposition of growth of output per hour worked is shown in Figure 4. In the recreation and culture, administrative services, and manufacturing industries, growth in output per hour worked was caused by an increase in gross value added (GVA) and a fall in hours worked.

Figure 4: The recreation and culture industry 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 4 (Oct to Dec) 2023 versus the same quarter a year ago, percentage change, UK

Figure 4: The recreation and culture industry 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 4 (Oct to Dec) 2023 versus the same quarter a year ago, percentage change, UK



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

4 . Productivity overview data

[Output per hour worked, UK](#)

Dataset | Released 14 May 2024

Estimates for gross value added (GVA), hours worked and output per hour worked for whole economy and section 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 worker, UK](#)

Dataset | Released 14 May 2024

Estimates for gross value added (GVA), workers, and output per worker for the whole economy and bespoke industry (market sector). Contains annual and quarterly statistics.

[Output per job, UK](#)

Dataset | Released 14 May 2024

Estimates for gross value added (GVA), jobs and output per job for the whole economy and by section 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.

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

Dataset | Released 14 May 2024

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.

5 . 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 (GDP).

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

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

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.

Flash estimates for Quarter 1 (Jan to Mar) 2024 in this release use the first available information from our [GDP first quarterly estimate bulletin](#) and labour market data from our [Labour market overview, UK: May 2024](#) to determine output for Quarter 1 2024. These data may be revised when we release the next publication. The labour productivity estimates by industry section and the datasets are produced by using the [GDP quarterly national accounts](#) and reweighted LFS data up to Quarter 4 (Oct to Dec) 2023.

More information on the differences between flash estimates for Quarter 1 2024 and data for Quarter 4 2023 can be found in our [Labour productivity Quality and Methodology Information \(QMI\)](#). Information on the National Accounts Revisions Policy can be found in our [National Accounts Revisions Policy: updated December 2023 methodology](#). Further information on the Labour Market Revisions Policy can be found in our [Revisions policies for labour market statistics methodology](#).

On 2 November 2023, the Office for National Statistics (ONS) published its [Labour Force Survey: planned improvements and its reintroduction methodology](#) to enable the reintroduction of the Labour Force Survey (LFS) following its suspension in October, when falling response rates led to increased data uncertainty. Following the development plan, we published our [Impact of reweighting on Labour Force Survey key indicators: 2024 article](#) on 5 February 2024. On 13 February 2024, the [labour market publication](#) reinstated reweighted LFS. This publication uses the latest reweighted LFS data.

The reweighting exercise has improved the representativeness of our LFS estimates for the period July to September 2022 onwards, reducing potential bias in our estimates.

Productivity data in this release reflect reweighted LFS data consistent with our [Labour market overview, UK: May 2024 bulletin](#). Whole economy estimates of workers are in line with the [A05SA dataset](#) released on 14 May 2024 in our [Labour market overview, UK: May 2024 bulletin](#). Whole economy estimates of total hours have been adjusted back to mid-2011 to ensure that headline productivity statistics can be assessed without a discontinuity, for the purposes of the productivity estimates, and are not part of the labour market release. The adjusted productivity hours worked diverge slightly from estimates of hours worked in the [HOUR01SA dataset](#), in time periods from 2011 to 2022.

We have also taken a new approach to reduce volatility in our industry estimates. We only include industry sections; there is no division level and bespoke industry level. The imputed rental is excluded from “Industry L: real estate” and for “Industry B: mining and quarrying”, employee average hours are calculated at section level.

New estimates of gross value added (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.

7 . 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 \(QMI\)](#).

8 . Related links

[GDP first quarterly estimate, UK: January to March 2024](#)

Bulletin | Released 10 May 2024

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 2024](#)

Bulletin | Released 14 May 2024

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

[GDP quarterly national accounts, UK: October to December 2023](#)

Bulletin | Released 28 March 2024

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.

[Public service productivity, quarterly, UK: October to December 2023](#)

Bulletin | Released 3 May 2024

UK total public service productivity, inputs and output to provide a short-term, timely indicator of annual productivity estimates. These are official statistics in development.

9 . Cite this statistical bulletin

Office for National Statistics (ONS), released 14 May 2024, ONS website, statistical bulletin, [Productivity flash estimate and overview, UK: January to March 2024 and October to December 2023](#)