

Article

# UK productivity flash estimate: July to September 2022

Flash estimate of labour productivity for Quarter 3 (July to Sept) 2022 based on the latest data from the gross domestic product (GDP) first quarterly estimate and labour market statistics.

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# 1 . Main points

- Output per hour worked in Quarter 3 (July to Sept) 2022 was 2.0% above its pre-coronavirus (COVID-19) pandemic levels, reflective of 0.7% growth in gross value added (GVA) and a 1.2% fall in the number of hours worked.
- Relative to pre-coronavirus pandemic levels, output per worker grew by 0.9%, with growth driven by a 0.7% increase in GVA and a decrease of 0.2% in the number of workers.
- Quarter on quarter, output per hour worked grew by 0.2% between Quarter 2 (Apr to June) 2022 and Quarter 3 2022.
- Within industry productivity effects continued to be the main driver of overall productivity growth relative to the pre-coronavirus pandemic levels in the quarters following the last lifting of the lockdown restrictions.

## 2 . Latest statistics

The labour productivity flash estimate uses the [latest labour market statistics](#) and the [gross value added \(GVA\) first quarterly estimates](#) to provide the first look at UK productivity for Quarter 3 (July to Sept) 2022. We use data from the Labour Force Survey (LFS) in estimating labour productivity.

The headline statistics we report compare UK productivity with its pre-coronavirus (COVID-19) pandemic levels, when productivity growth was more stable. This provides a useful perspective on how the coronavirus pandemic has affected UK productivity as the data in 2020 and 2021 are volatile. Therefore, we continue to recommend looking at longer-term trends.

Table 1: The latest productivity statistics  
UK, Quarter 1 (Jan to Mar) 2020 to Quarter 3 (July to Sept) 2022

Period	Output per hour worked growth rates			Output per worker growth rates		
	Quarter vs 2019 pre-pandemic level (%)	Quarter-on-year (%)	Quarter-on-quarter (%)	Quarter vs 2019 pre-pandemic level (%)	Quarter-on-year (%)	Quarter-on-quarter (%)
<b>2020 Q1</b>	-0.2	0.4	-0.8	-2.5	-2.4	-2.5
<b>2020 Q2</b>	-3.9	-3.5	-3.8	-22.0	-21.6	-19.9
<b>2020 Q3</b>	3.9	3.6	8.2	-8.2	-8.7	17.6
<b>2020 Q4</b>	-0.3	-0.9	-4.1	-6.4	-6.4	2.0
<b>2021 Q1</b>	0.2	0.3	0.5	-7.5	-5.1	-1.2
<b>2021 Q2</b>	1.3	5.5	1.1	-1.9	25.7	6.1
<b>2021 Q3</b>	0.5	-3.3	-0.8	-1.0	7.8	0.9
<b>2021 Q4</b>	2.1	2.4	1.6	0.7	7.6	1.7
<b>2022 Q1</b>	1.4	1.2	-0.6	1.1	9.4	0.5
<b>2022 Q2</b>	1.8	0.4	0.3	0.9	2.8	-0.3
<b>2022 Q3</b>	2.0	1.4	0.2	0.9	1.9	0.0

Source: Office for National Statistics – UK productivity flash estimate

### 3 . Output per hour worked

Output per hour worked grew by 0.2% between Quarter 2 (Apr to Jun) 2022 and Quarter 3 (July to Sept) 2022, and it was 2.0% above its pre-coronavirus (COVID-19) pandemic levels.

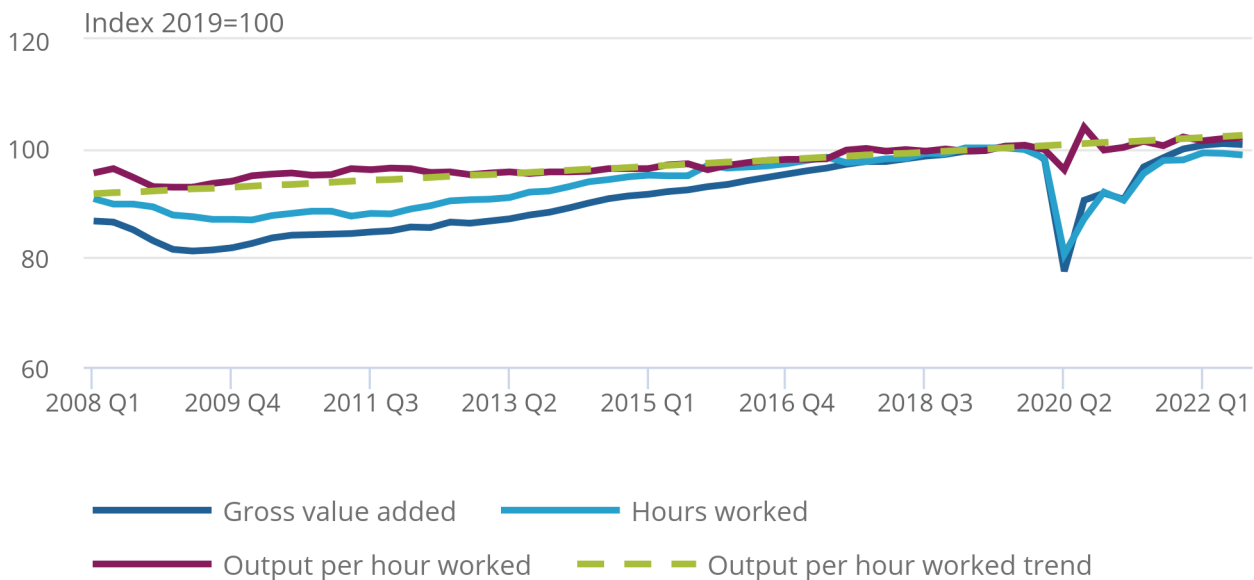
Quarter on quarter, output per hour growth reflected a fall of 0.4% in the number of hours worked compared with a fall of 0.2% in gross value added (GVA). Relative to a year earlier, Quarter 3 2021, output per hour worked increased by 1.4% as GVA grew by 2.4% in comparison with growth of 0.9% in the number of hours worked.

**Figure 1: Output per hour worked was 2.0% above pre-coronavirus (COVID-19) pandemic levels and 0.2% higher relative to the previous quarter**

Output per hour worked, gross value added (GVA), hours worked, UK, index 2019 = 100, Quarter 1 (Jan to Mar) 2008 to Quarter 3 (July to Sept) 2022

Figure 1: Output per hour worked was 2.0% above pre-coronavirus (COVID-19) pandemic levels and 0.2% higher relative to the previous quarter

Output per hour worked, gross value added (GVA), hours worked, UK, index 2019 = 100, Quarter 1 (Jan to Mar) 2008 to Quarter 3 (July to Sept) 2022



Source: Office for National Statistics – UK productivity flash estimate

Notes:

1. Average growth between Quarter 2 (Apr to June) 2009 (the low point after the 2008 economic downturn) and Quarter 4 (Oct to Dec) 2019 (the highpoint before the coronavirus pandemic) is used as the trend as this is a long enough period to establish a trend line. Productivity growth has been consistently slower since the 2008 economic downturn, so using trend growth from earlier years would be inappropriate.

## 4 . Output per worker

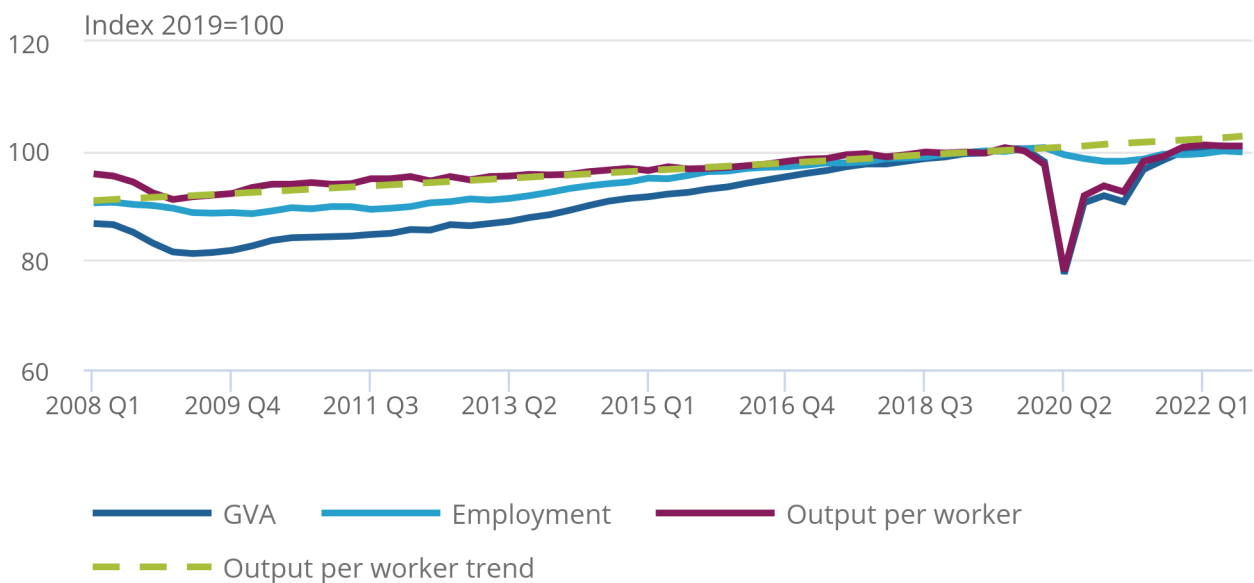
We also report output per worker as a measure of productivity. This is the ratio of total output relative to the number of workers. Output per worker remained unchanged between Quarter 3 (July to Sept) 2022 and Quarter 2 (Apr to Jun) 2022. Relative to its pre-coronavirus (COVID-19) pandemic levels, productivity as measured by output per worker grew by 0.9%. This increase was driven by growth of 0.7% in gross value added (GVA) and a decrease of 0.2% in the number of workers.

**Figure 2: Output per worker remained unchanged quarter on quarter**

Output per worker, gross value added, employment, UK, index 2019 = 100, Quarter 1 (Jan to Mar) 2008 to Quarter 3 (July to Sept) 2022

### Figure 2: Output per worker remained unchanged quarter on quarter

Output per worker, gross value added, employment, UK, index 2019 = 100, Quarter 1 (Jan to Mar) 2008 to Quarter 3 (July to Sept) 2022



Source: Office for National Statistics – UK productivity flash estimate

**Notes:**

1. Average growth between Quarter 2 (Apr to June) 2009 (the low point after the 2008 economic downturn) and Quarter 4 (Oct to Dec) 2019 (the highpoint before the coronavirus pandemic) is used as the trend as this is a long enough period to establish a trend line. Productivity growth has been consistently slower since the 2008 economic downturn, so using trend growth from earlier years would be inappropriate.
2. 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 etc. 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.

## 5 . Productivity changes within industries and between industries allocation

Throughout the coronavirus (COVID-19) pandemic period, growth in productivity as measured by output per hour worked was driven by between industry allocation effects, as furlough schemes more heavily affected lower productivity sectors.

There have been recent declines in the contribution of the allocation effects to productivity growth. This reflects the return to work of workers in these sectors following the end of the furlough scheme and the lifting of all coronavirus pandemic restrictions.

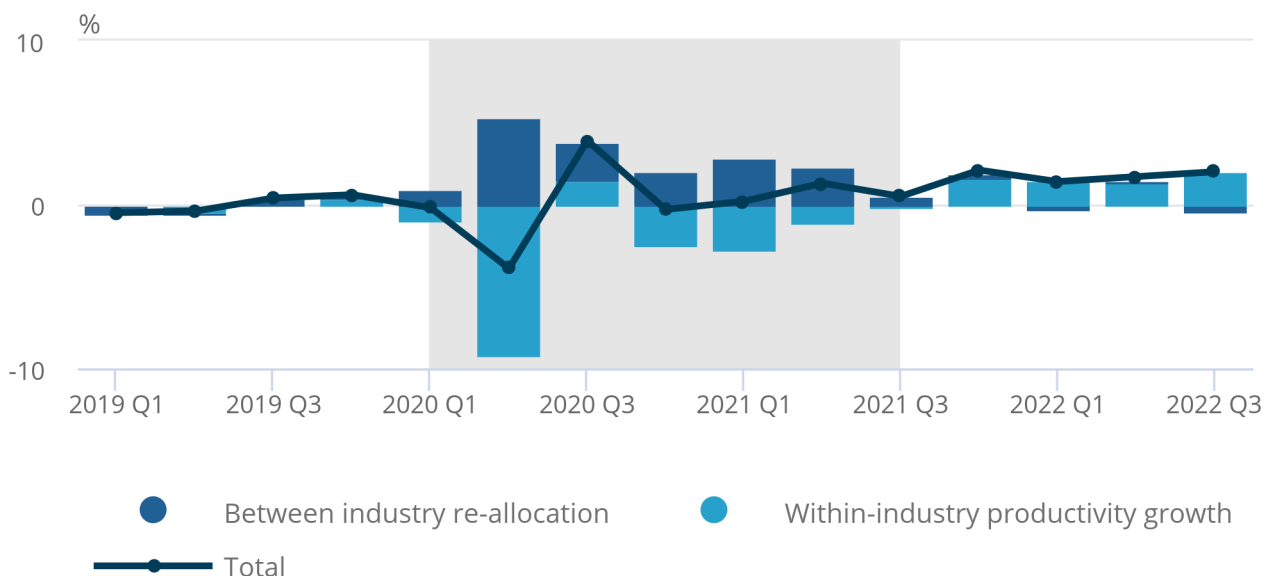
Relative to pre-coronavirus pandemic levels, within industry effects have been the main driver of growth in output per hour, with allocation effects recording a negative contribution to productivity growth since Quarter 1 (Jan to Mar) 2022.

**Figure 3: Within industry productivity effects continue to be the main driver of overall productivity in the quarters following the lifting of the lockdown restrictions**

Output per hour worked growth, decomposed into between and within-industry effects, cumulative growth since 2019, percentage, Quarter 1 (Jan to Mar) 2019 to Quarter 3 (July to Sept) 2022

Figure 3: Within industry productivity effects continue to be the main driver of overall productivity in the quarters following the lifting of the lockdown restrictions

Output per hour worked growth, decomposed into between and within-industry effects, cumulative growth since 2019, percentage, Quarter 1 (Jan to Mar) 2019 to Quarter 3 (July to Sept) 2022



Source: Office for National Statistics – UK productivity flash estimate

Notes:

1. The between industry allocation effect is calculated across 26 industry sections. Slightly different results may be obtained depending on the industry granularity used in the analysis.
2. The between industry allocation effect and growth within industries may not add up to the output per hour total. This is because of the exclusion of the National Accounts balancing value.

## 6 . UK productivity flash estimate data

### [Flash productivity by section](#)

Dataset | Released 15 November 2022

Flash estimate of labour productivity by section. The latest data are from the gross domestic product (GDP) first quarterly estimate and labour market statistics.

We are not publishing industry estimates of labour productivity because we are updating our systems. The industry estimates published as part of the “Flash productivity by section” will follow shortly. They will be published alongside the next edition of our bulletin.

## 7 . 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 sometimes workers or jobs ("productivity jobs") are also used.

### Output

Output is measured by gross value added (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 3 (July to Sept) 2022. These data may be revised when we release the more detailed [Productivity overview in January 2023](#).

This release uses gross value added (GVA) from the [gross domestic product \(GDP\) first quarterly estimate](#) to determine output. Labour market data are from the [Labour market overview, UK: October 2022 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.

First quarter estimates of GVA are subject to change. This reflects the use of new data and methods, but also [challenges in reconciling quarterly and annual GDP data](#). As productivity is a structural feature of the economy, we continue to advise users to focus on long-term trends of productivity.

More details on the flash by industry methodology is described in the Guidance tab of our [accompanying dataset](#).

## 9 . Related links

[Productivity overview, UK: April to June 2022](#)

Bulletin | Released 7 October 2022

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

[GDP first quarterly estimate, UK: April to June 2022](#)

Bulletin | Released 12 August 2022

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: October 2022](#)

Bulletin | Released 11 October 2022

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

## 10 . Cite this article

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