

Article

Productivity flash estimate and overview, UK: October to December 2025 and July to September 2025

Productivity flash estimates for Quarter 4 (Oct to Dec) 2025, based on the GDP first quarterly estimate and labour market statistics, and productivity overview for Quarter 3 (July to Sept) 2025.

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

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1 . Main points

Flash estimate of labour productivity for Quarter 4 (Oct to Dec) 2025

- Estimates based on the Labour Force Survey (LFS) indicate output per hour worked in Quarter 4 (Oct to Dec) 2025 was 0.5% lower, compared with Quarter 4 2024, while output per worker decreased by 0.2%, compared with the same period.
- Estimates produced using administrative data-based methods, incorporating Pay As You Earn (PAYE) Real Time Information (RTI) and LFS data sources, indicate output per hour and output per worker were 1.6% and 2.0% higher in Quarter 4 2025, respectively, compared with Quarter 4 2024.
- We will soon begin user consultation on moving to the use of administrative data-based methods, incorporating PayAsYou Earn (PAYE) Real Time Information (RTI) and LFS data sources as a lead indicator.

Labour productivity by industry section for Quarter 3 (July to Sept) 2025

- The information and communication industry made the biggest positive contribution to productivity growth, compared with the 2019 average; this was caused by a larger increase in gross value added (GVA) compared with hours worked.
- Financial and insurance activities made the biggest negative contribution to productivity growth, compared with the 2019 average; this was caused by a small increase in the number of hours worked, alongside a more significant fall in output.
- In December of each year, regular adjustments are made to workforce jobs (WFJ) estimates to improve quality and coherence with other Office for National Statistics (ONS) business surveys, resulting in revisions to the series; more information can be found in our [Revisions to workforce jobs, UK: December 2025 bulletin](#) and in [Section 4: Labour productivity by industry section for Quarter 3 2025](#).
- We will be undertaking a review of the energy industry to better understand productivity movements in this industry.

2 . Flash estimate of labour productivity for Quarter 4 2025

Flash estimate using the Labour Force Survey

The results in this article are consistent with labour market data from our [Labour market overview, UK: February 2026 bulletin](#). The gross value added (GVA) estimate used in this section is from our [GDP first quarterly estimate, UK : October to December 2025 bulletin](#).

We published our latest [Labour Force Survey quality update: January 2026 article](#) on 20 January 2026. This article provides users with information to better understand the current quality of labour market data and guidance on how best to use the data in their analysis.

Output per hour worked was 2.4% above its pre-coronavirus (COVID-19) pandemic level (2019 average level) in Quarter 4 (Oct to Dec) 2025 (Table 1). This growth was caused by a 6.0% increase in GVA and a 3.5% increase in hours worked over this period.

Output per hour worked decreased by 0.5% in Quarter 4 2025, compared with Quarter 4 2024. This is because GVA increased 1.0%, which is less than the 1.5% increase in hours worked.

Table 1: Flash estimate of labour productivity, using Labour Force Survey sources
Quarter 3 (July to Sept) 2024 to Quarter 4 (Oct to Dec) 2025, UK

Period	Output per hour growth rates			Output per worker growth rates		
	Quarter vs 2019 level (%)	Quarter-on-year ago (%)	Quarter-on-quarter (%)	Quarter vs 2019 level (%)	Quarter-on-year ago (%)	Quarter-on-quarter (%)
Q4 2024	2.9	0.0	1.0	2.1	0.5	0.0
Q1 2025	3.1	0.3	0.2	2.4	-0.2	0.3
Q2 2025	2.3	-0.6	-0.8	1.9	-0.8	-0.5
Q3 2025	3.0	1.0	0.6	2.0	0.0	0.1
Q4 2025	2.4	-0.5	-0.6	1.9	-0.2	-0.1

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.

The pandemic had a substantial short-term effect on the growth rate of productivity. However, unlike most "standard" recessions that show a subsequent sustained fall in productivity (such as the financial downturn in 2008 to 2009), the growth rate rapidly bounced back and even exceeded the trend rate.

Nevertheless, the 2009 to 2019 trend was historically weak and is commonly described as the "productivity puzzle". The recent movements in productivity since the pandemic, using estimates based on the LFS, suggest this underlying weakness in UK productivity growth continues, with the most recent data showing a growing alignment to this extrapolated trend.

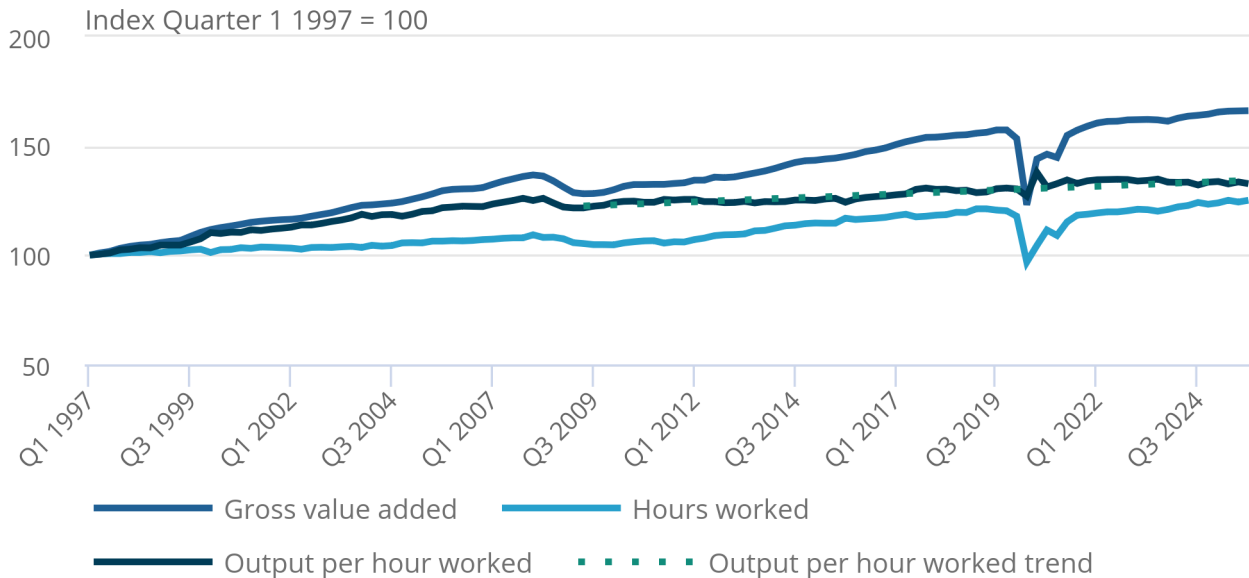
Productivity growth has slowed in recent quarters and begun to demonstrate below-trend growth, as shown in Figure 1. However, it is important to not overinterpret this; when looking at the 2011 to 2016 period, there is a similar path to that experienced since 2021. This is most clearly presented in Figure 2, as both time periods move from the top of the confidence interval to the bottom over a four to five year cycle. The main challenge when reviewing short time periods is identifying what is a change in trend, and what is a particular effect caused by a one-off factor, such as the Russian invasion of Ukraine.

Figure 1: Output per hour worked was 2.4% above its pre-coronavirus (COVID-19) pandemic level (2019 average level) in October to December 2025

Output per hour, gross value added (GVA), hours worked, UK, Quarter 1 (Jan to Mar) 1997 to Quarter 4 (Oct to Dec) 2025

Figure 1: Output per hour worked was 2.4% above its pre-coronavirus (COVID-19) pandemic level (2019 average level) in October to December 2025

Output per hour, gross value added (GVA), hours worked, UK, Quarter 1 (Jan to Mar) 1997 to Quarter 4 (Oct to Dec) 2025



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

Notes:

1. The output per hour trendline was constructed using a linear regression of the period Quarter 1 2009 to Quarter 4 2019 after using the Cochrane-Orcutt (CO) estimation, as described in our [Productivity trends in the UK: July to September 2024 article](#). These trendlines are for visualisation purposes only. Statistical inference should be treated with caution because the post-2019 points are an extrapolation.

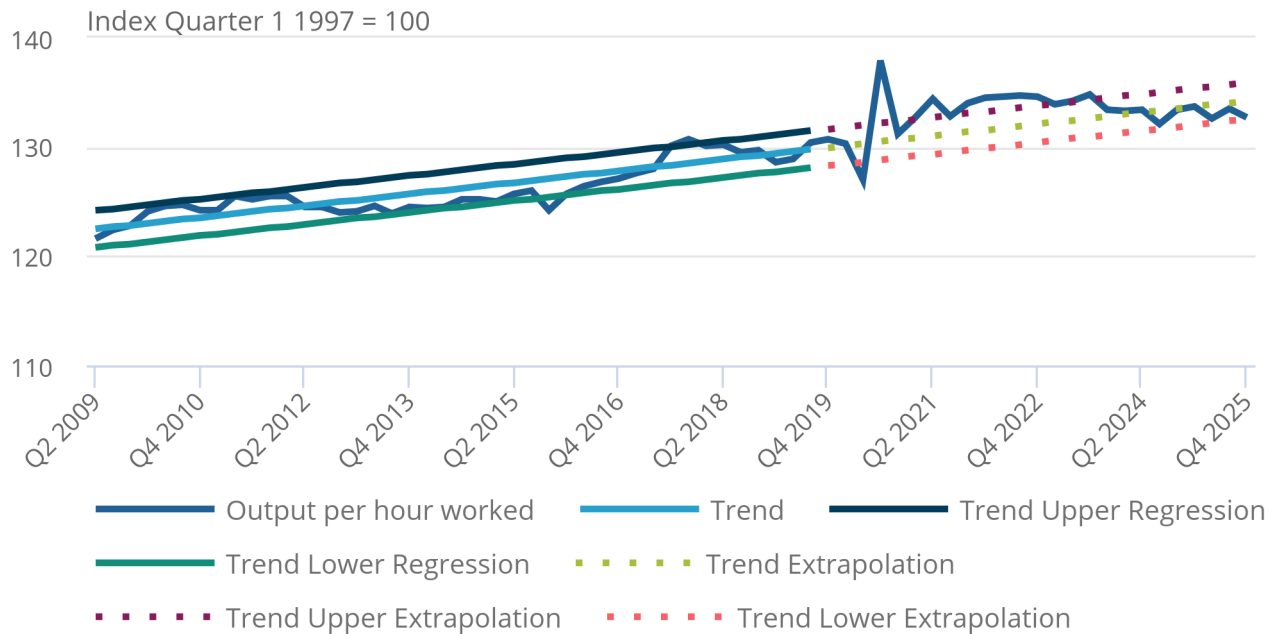
Acknowledging the break in the trend rate of growth around the 2008 global financial crisis, we have calculated the 95% confidence interval around the trend between Quarter 1 (Jan to Mar) 2009 and Quarter 4 2019 to contextualise growth. Output per hour worked is inside the boundaries of the 95% confidence interval. It is worth noting that in the period after the pandemic restrictions, the series exceeded the upper confidence interval for prolonged periods (up to six quarters). This is because the industries that were most affected by furlough, which was mainly taken up by lower productivity industries, took time to revert back to normal activity (for example, tourism).

Figure 2: Output per hour worked growth in October to December 2025 was below medium-term trends

Output per hour, trend with upper and lower bound, extrapolated trend with upper and lower bound, UK, Quarter 2 (Apr to June) 2009 to Quarter 4 (Oct to Dec) 2025

Figure 2: Output per hour worked growth in October to December 2025 was below medium-term trends

Output per hour, trend with upper and lower bound, extrapolated trend with upper and lower bound, UK, Quarter 2 (Apr to June) 2009 to Quarter 4 (Oct to Dec) 2025



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

Notes:

1. The trendline is constructed as in Figure 1.
2. For information about how we construct confidence intervals in our figures, see [Section 7: Data sources and quality](#).

Output per worker was 1.9% above its pre-coronavirus (COVID-19) pandemic level (2019 average level) in Quarter 4 2025, as shown in Table 1. This growth was caused by a 6.0% increase in GVA and a 4.0% increase in workers over the period.

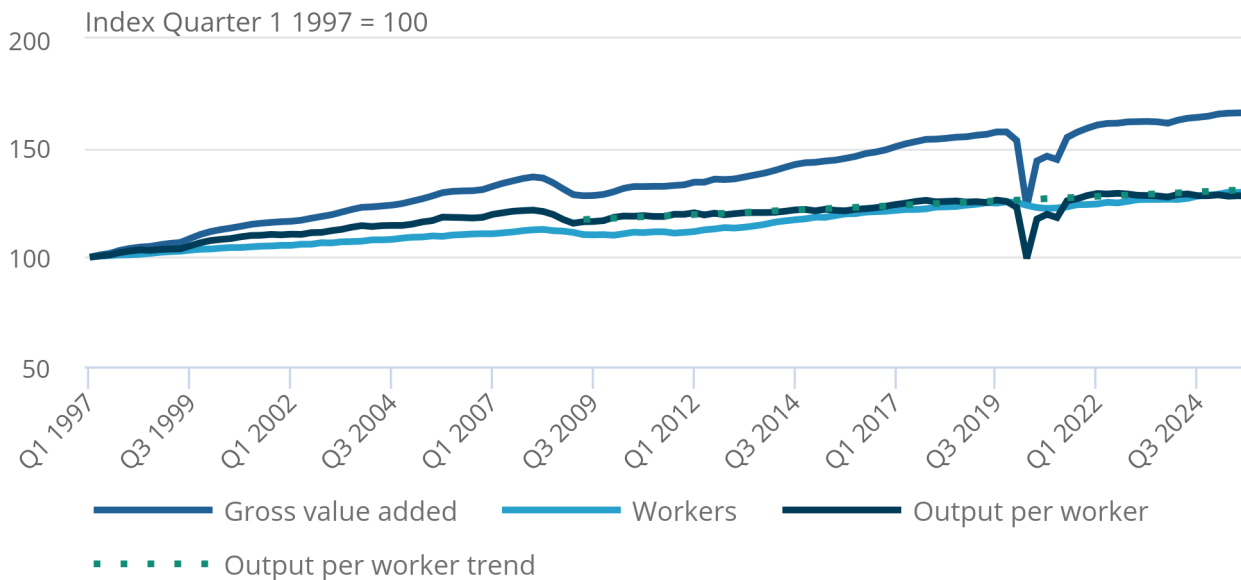
Output per worker growth was negative 0.2% in Quarter 4 2025, compared with Quarter 4 2024. This is because GVA increased by 1.0%, which is a slower rate than the number of workers (1.1%).

Figure 3: Output per worker was 1.9% above its pre-coronavirus (COVID-19) level in October to December 2025

Output per worker, gross value added, workers, UK, Quarter 1 (Jan to Mar) 1997 to Quarter 4 (Oct to Dec) 2025

Figure 3: Output per worker was 1.9% above its pre-coronavirus (COVID-19) level in October to December 2025

Output per worker, gross value added, workers, UK, Quarter 1 (Jan to Mar) 1997 to Quarter 4 (Oct to Dec) 2025



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

Notes:

1. The trendline is constructed as in Figure 1.

3 . Flash estimates produced using administrative data methods with different data sources

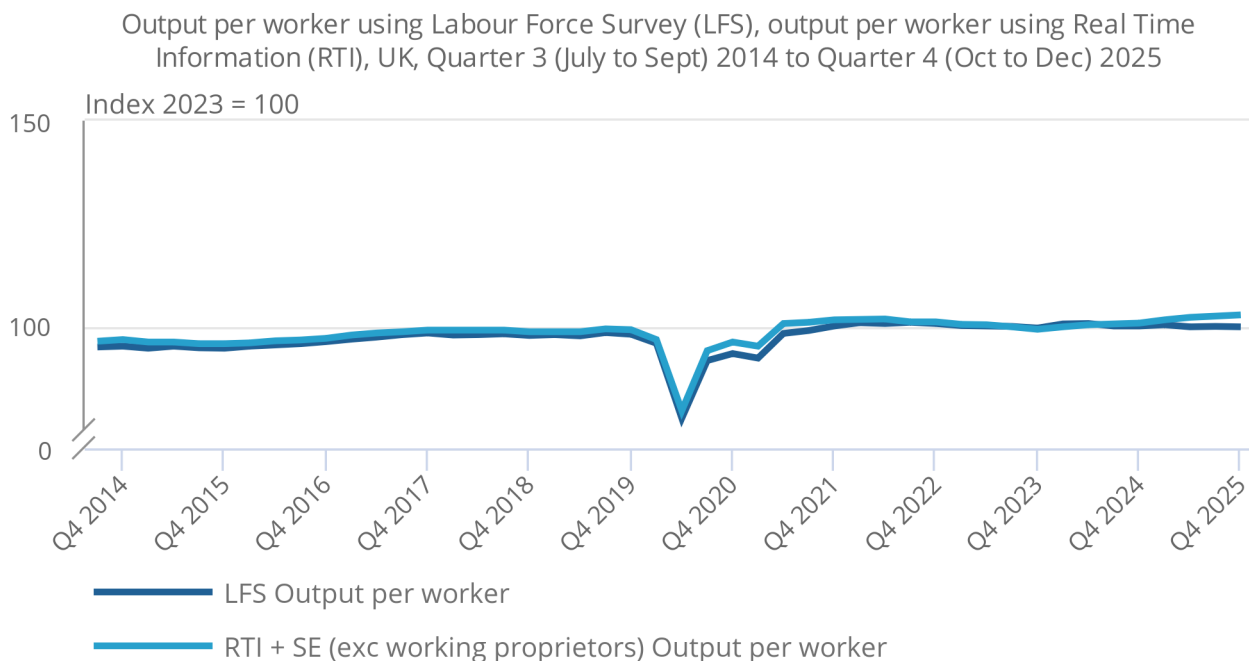
For information on our Real Time Information (RTI) method, please see Section 3: Flash estimates, produced using experimental methods, with different data sources of our [Productivity flash estimate and overview, UK: January to March 2025 and October to December 2024 bulletin](#). Users should be aware that the estimates within this section are official statistics in development.

Figure 4 shows that the latest output per worker quarterly estimates calculated using the Labour Force Survey (LFS) and the RTI have continued to diverge. The RTI measure increased by 3.8%, while the LFS measure increased by 1.9%, when comparing Quarter 4 (Oct to Dec) 2025 levels for each series with their 2019 average.

Figure 4: Output per worker using RTI data was 3.8% above its 2019 (average) level in October to December 2025, while output per hour using LFS data had increased 1.9% when comparing the same periods

Output per worker using Labour Force Survey (LFS), output per worker using Real Time Information (RTI), UK, Quarter 3 (July to Sept) 2014 to Quarter 4 (Oct to Dec) 2025

Figure 4: Output per worker using RTI data was 3.8% above its 2019 (average) level in October to December 2025, while output per hour using LFS data had increased 1.9% when comparing the same periods



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

Notes:

1. RTI worker estimate is supplemented by LFS self-employed data.
2. No adjustment is made for those that are employed but not part of Pay As You Earn (PAYE).
3. Any individual who has a main job outside of the PAYE scheme and a second job on the PAYE scheme will be categorised as only having a main job.

RTI does not collect actual hours worked. This means that the whole-economy hours worked for both RTI and LFS are calculated by multiplying LFS average hours worked with the number of workers (Figure 5). The impact on output per hour can be observed by varying the data source for workers, given the differences in worker counts reported by each source.

In recent quarters, the Pay As You Earn (PAYE) data have indicated stronger growth than the LFS data. The LFS series has remained largely flat since Quarter 4 2023, while PAYE has continued to record sustained growth. From 2014 to 2022, there was a fairly consistent difference between the level of the LFS and RTI data. From 2022 to 2024, the series converged. Though as the LFS has improved in quality as a data source, there appears some evidence that the difference in levels terms between the two series is returning. However, the two data series exhibit broadly similar trends and comparable levels of volatility when comparing quarterly movements.

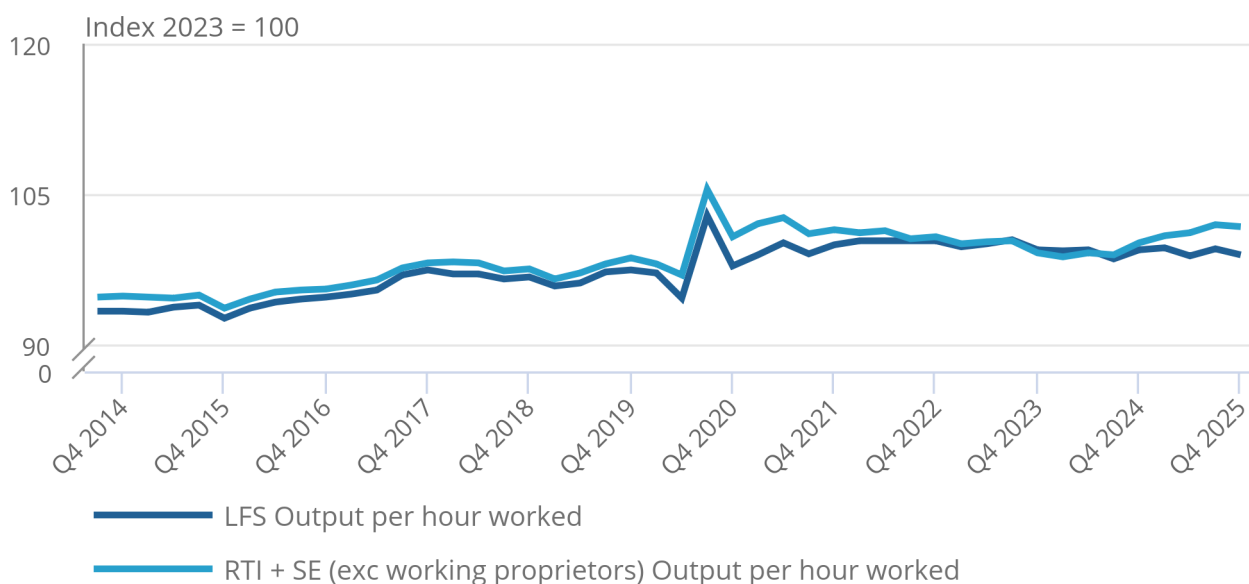
Users should apply caution not to overinterpret these results. PAYE data may better reflect economic theory, which would anticipate that the economic consequences of the supply shock that was induced by the Russian invasion of Ukraine would dampen productivity before it recovers. However, a relatively small movement in either series in future quarters could close or widen these differences radically. Users who wish to raise questions around the exact composition of these metrics should contact productivity@ons.gov.uk.

Figure 5: Output per hour using RTI data was 4.3% above its 2019 (average) level in October to December 2025, while output per hour using LFS data increased 2.4% when comparing the same periods

Output per hour using Labour Force Survey (LFS), output per hour using Real Time Information (RTI), UK, Quarter 3 (July to Sept) 2014 to Quarter 4 (Oct to Dec) 2025

Figure 5: Output per hour using RTI data was 4.3% above its 2019 (average) level in October to December 2025, while output per hour using LFS data increased 2.4% when comparing the same periods

Output per hour using Labour Force Survey (LFS), output per hour using Real Time Information (RTI), UK, Quarter 3 (July to Sept) 2014 to Quarter 4 (Oct to Dec) 2025



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

4 . Labour productivity by industry section for Quarter 3 2025

The results in this article are consistent with labour market data from our [Labour market overview, UK: January 2026 bulletin](#). The gross value added (GVA) used in this section is from our [GDP quarterly national accounts, UK: July to September 2025 bulletin](#).

Workforce jobs changes to productivity

Regular adjustments are made to workforce jobs (WFJ) estimates in December of each year to improve quality and coherence with other Office for National Statistics (ONS) business surveys, resulting in revisions to the series. Adjustments include:

- benchmarking the short-term employee jobs series to the latest estimates from the annual Business Register and Employment Survey
- incorporating revisions to Public Sector Employment estimates, Northern Ireland employee jobs estimates, government-supported trainees (GST) administrative data, and Short-Term Employment Surveys estimates
- changes to seasonal parameters following a seasonal adjustment review

More information can be found in our [Revisions to workforce jobs, UK: December 2025 bulletin](#).

Contribution to UK productivity growth and decomposition

Figure 6 shows the contribution to growth in output per hour worked for 19 industries in Quarter 3 (July to Sept) 2025, relative to the 2019 (average).

The information and communication industry made the largest upward contribution to productivity growth (2.2%), compared with the 2019 (average). Financial and insurance activities made the largest negative contribution to productivity growth (negative 1.1%) over the same period.

Even if every industry were to experience zero productivity growth, it is possible for the whole economy to grow if higher productivity sectors grow and weaker productivity sectors shrink. This movement (the "between-industry effect") has made a 0.4% contribution to productivity growth in the comparison with the 2019 (average). This is the first time since Quarter 3 (July to Sept) 2023 that a positive reallocation effect has been measured, when comparing the current quarter against the same quarter a year ago. This indicates that there has been a small shift, on average, in economic activity from industries with lower productivity to industries with higher productivity. This may be caused by a movement of hours, not jobs. This finding should be interpreted with caution, as the magnitude of the observed change is relatively small.

Figure 6: The information and communication industry made the biggest upward contribution to output per hour in July to September 2025, compared with the 2019 average

Contribution to growth of output per hour worked, percentage points, Quarter 3 (July to Sept) 2025 compared with 2019 average

Notes:

1. The industry contributions may not add up to the total growth in output per hour because of the National Accounts balancing value and the impact of rounding.
2. The "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.
3. The relative size of an industry shown is based on the current price (CP) value from 2019 (average).

Figure 7 shows the decomposition of growth of output per hour worked. Growth in the information and communication industry was mainly caused by an increase in gross value added (GVA).

The large decrease in output per hour in the electricity, gas, steam and air conditioning supply industry should be treated with caution. This series is subject to high volatility. We are reviewing and investigating improvements to the data sources and methods. We will aim to publish the results of our investigations into this industry later this year.

Figure 7: Output per hour in the IT industry grew by 32%, compared with its 2019 average, because of a large increase in gross value added

Decomposition of growth of output per hour worked, hours worked and gross value added (GVA), Quarter 3 (July to Sept) 2025 compared with 2019 average, percentage change, UK

Notes:

1. The industry contributions may not add up to the total growth in output per hour. This is owing to the National Accounts balancing value and the impact of rounding.
2. "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 that are not covered elsewhere in our Standard Industrial Classification (SIC) 2007.
3. The relative size of an industry shown is based on the Current Price (CP) value from 2019.

5 . Data on productivity flash estimate and overview

[Output per hour worked, UK](#)

Dataset | Released 17 February 2026

Estimates for gross value added (GVA), hours worked and output per hour worked for whole economy and section 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 hour worked.

[Output per worker, UK](#)

Dataset | Released 17 February 2026

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 17 February 2026

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

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

Dataset | Released 17 February 2026

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.

[Output per job by division, UK](#)

Dataset | Released 17 February 2026

Estimates for gross value added (GVA), jobs and output per job for bespoke industries and division level industry, as defined by the Standard Industrial Classification (SIC) 2007. Contains annual and quarterly statistics.

[Output per hour worked by division, UK](#)

Dataset | Released 17 February 2026

Estimates for gross value added (GVA), hours worked and output per hour worked for bespoke industries and division level industry, as defined by the Standard Industrial Classification (SIC) 2007. Contains annual and quarterly statistics.

6 . Glossary

Gross value added

Gross value added (GVA) is 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.

7 . Data sources and quality

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

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 and the 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 Pay As You Earn (PAYE) Real Time Information (RTI) comes from our monthly [Earnings and employment from Pay As You Earn Real Time Information, UK - Office for National Statistics](#), with estimates of payrolled employees and their pay from HM Revenue and Customs (HMRC). More information on the methods used to derive monthly employee and earnings estimates from PAYE RTI administrative data can be found in our [New methods for monthly earnings and employment estimates from PAYE RTI data: December 2019 article](#).

Imputed rental is excluded from "Industry L: real estate" because including it would distort productivity measures, since the output is mainly an imputed value rather than a result of labour or market service provision. For "Industry B: mining and quarrying", employee average hours are calculated at section level because reliable and detailed data on average hours worked is only available for the entire section, rather than for each division within the section.

Labour Force Survey reweighting

We published our [Labour Force Survey: planned improvements and its reintroduction methodology](#) on 2 November 2023. This enabled the reintroduction of the Labour Force Survey (LFS) following its suspension in October 2023, when falling response rates led to increased data uncertainty.

Productivity data in this release reflect reweighted LFS data consistent with our [Labour market overview, UK: January 2026 bulletin](#). Whole-economy estimates of second jobs and total hours have been adjusted back to mid-2011. This will ensure that headline productivity statistics can be assessed without a discontinuity. This is for the purposes of productivity estimates only and they are not part of the labour market release. Therefore, the adjusted productivity jobs and the adjusted productivity hours worked diverge slightly from the estimates in our [Full-time, part-time and temporary workers dataset](#) and our [Actual weekly hours worked dataset from 2011 to 2019](#).

Trendlines and confidence intervals

We construct the 95% confidence intervals around the trendlines in our figures by first calculating the standard error (SE) by dividing the standard deviation of residuals by the square root of the number of periods. Then, we determine the critical value corresponding to the 95% confidence level (1.96) and multiply it by the SE. Finally, we use this value to create the interval by adding and subtracting the result from the predicted trendline value at each point, providing the upper and lower bounds of the confidence interval.

Our trendlines are based on research we published in our [Productivity trends in the UK: July to September 2024 article](#) and updated with the revisions caused by Bluebook 2025. Please email productivity@ons.gov.uk with your comments and views.

Accredited official statistics

Our GVA estimates and Pay As You Earn (PAYE) Real Time Information (RTI) estimates for payrolled employees are accredited official statistics.

These accredited official statistics were independently reviewed by the Office for Statistics Regulation in March 2015 for GVA and July 2025 for RTI. They comply with the standards of trustworthiness, quality, and value in the [Code of Practice for Statistics](#) and should be labelled "accredited official statistics".

Official statistics in development

The labour market and productivity statistics in this article are labelled as “official statistics in development”. Until October 2023, these were called "experimental statistics". Read more about the change in our [guide to official statistics in development](#).

To help us meet user needs, please email productivity@ons.gov.uk with any feedback our statistics.

8 . Related links

[GDP first quarterly estimate, UK: October to December 2025](#)

Bulletin | Released 12 February 2026

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: February 2026](#)

Bulletin | Released 17 February 2026

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

[GDP quarterly national accounts, UK: July to September 2025](#)

Bulletin | Released 22 December 2025

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.

[Earnings and employment from Pay As You Earn Real Time Information, UK: February 2026](#)

Bulletin | Released 17 February 2026

Monthly estimates of payrolled employees and their pay from HM Revenue and Customs' (HMRC's) Pay As You Earn (PAYE) Real Time Information (RTI) data. This is a joint release between HMRC and the Office for National Statistics (ONS). These are official statistics in development.

[Public service productivity, quarterly, UK: July to September 2025](#)

Bulletin | Released 6 February 2026

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

9 . Cite this article

Office for National Statistics (ONS), released 17 February 2026, ONS website, article, [Productivity flash estimate and overview, UK: October to December 2025 and July to September 2025](#)