Office for National Statistics

Article

Productivity flash estimate and overview, UK: July to September 2025 and April to June 2025

Productivity flash estimates for Quarter 3 (July to Sept) 2025, based on the GDP first quarterly estimate and labour market statistics, and productivity overview for Quarter 2 (Apr to June) 2025.

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Release date:
13 November 2025

Next release:
17 February 2026

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1 . Main points

Flash estimate of labour productivity for Quarter 3 (July to Sept) 2025

- Estimates based on the Labour Force Survey (LFS) indicate output per hour worked in Quarter 3 (July to Sept) 2025 was 3.1% higher compared with its pre-coronavirus (COVID-19) pandemic levels (2019 average level), while output per worker was 2.1% higher 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 4.7% and 3.7% higher, respectively, compared with the 2019 average level.
- LFS and RTI derived estimates show some divergence in the most recent time periods; more information about which source of information on jobs and working patterns should be used to best estimate changes in productivity is available in Section 3: Flash estimates, produced using administrative data methods, with different data sources.

Labour productivity by industry section for Quarter 2 (Apr to June) 2025

- Compared with the 2019 average, the information and communication industry made the biggest positive contribution (2.5%) to productivity growth, caused by an increase in gross value added (GVA).
- Compared with the 2019 average, financial and insurance activities made the biggest negative contribution (-1.2%) to productivity growth, caused by a small increase in the number of hours worked alongside a more significant fall in output.
- Updated Blue Book 2025 figures are fully reflected in this article and since Quarter 1 (Jan to Mar) 1997, whole economy productivity levels have been lifted by around 8.0% in real terms; further details are available in Section 4: Labour productivity by industry section for Quarter 2 2025.

2 . Flash estimate of labour productivity for Quarter 3 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: November 2025. The gross value added (GVA) estimate used within this section is from our GDP first quarterly estimate, UK : July to September 2025 bulletin.

On 16 September 2025, we published our latest Labour Force Survey quality update: September 2025 article providing users with information to better understand the current quality of the data, and guidance on how best to use the data in their analysis.

Output per hour worked was 3.1% above its pre-coronavirus (COVID-19) pandemic levels (2019 average level) in Quarter 3 (July to Sept) 2025, as shown in Table 1. This growth was caused by an increase in GVA of 6.1% and an increase in hours worked by 2.9% over the period.

Output per hour worked was higher (1.1%) in Quarter 3 2025 compared with the same quarter a year ago. This is because GVA increased more than hours worked (1.3% and 0.2% respectively).

Table 1: Flash estimate of labour productivity, using LFS sources
UK, Quarter 3 (July to Sept) 2024 to Quarter 3 2025

	Output per hour growth rates			Output per worker growth rates		
	Quarter versus 2019 level (%)	Quarter-on-year ago (%)	Quarter-on-quarter (%)	Quarter versus 2019 level (%)	Quarter-on-year ago (%)	Quarter-on-quarter (%)
Period						
2024 Q3	2.0	-1.9	-0.9	2.1	0.1	-0.6
2024 Q4	2.9	0.0	0.9	2.1	0.5	0.0
2025 Q1	3.1	0.3	0.2	2.4	-0.2	0.3
2025 Q2	2.4	-0.5	-0.7	2.0	-0.7	-0.4
2025 Q3	3.1	1.1	0.7	2.1	0.0	0.2

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.

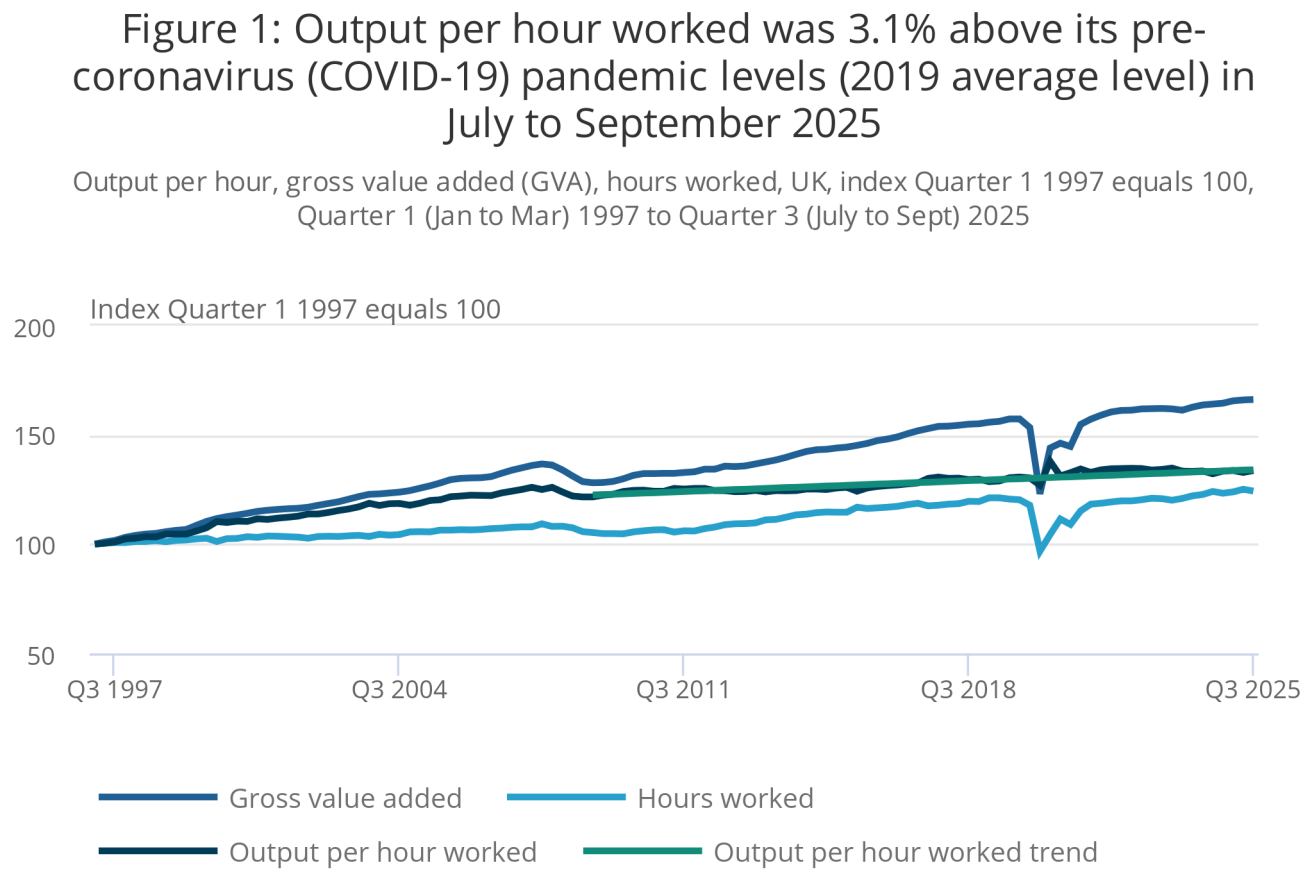
The coronavirus pandemic had a substantial short-term effect on the growth rate of productivity. Unlike most "standard" recessions that show a subsequent sustained fall in productivity (such as the financial downturn in 2008 to 2009), the growth rate rapidly bounced back and even exceeded the trend rate.

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

In recent quarters, as Figure 1 shows, productivity growth has slowed and begun to stabilise around the Quarter 1 (Jan to Mar) 2009 to Quarter 4 (Sept to Dec) 2019 weak trend growth. However, it is important to not over-interpret this; when looking at the 2011 to 2016 period, we can see a similar path to that experienced since 2021. This is most clearly shown 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 3.1% above its pre-coronavirus (COVID-19) pandemic levels (2019 average level) in July to September 2025

Output per hour, gross value added (GVA), hours worked, UK, index Quarter 1 1997 equals 100, Quarter 1 (Jan to Mar) 1997 to Quarter 3 (July to Sept) 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 2009 Q1 to 2019 Q4 after using the Cochrane-Orcutt (CO) estimation as described in our Productivity trends in the UK: July to September 2024 article.

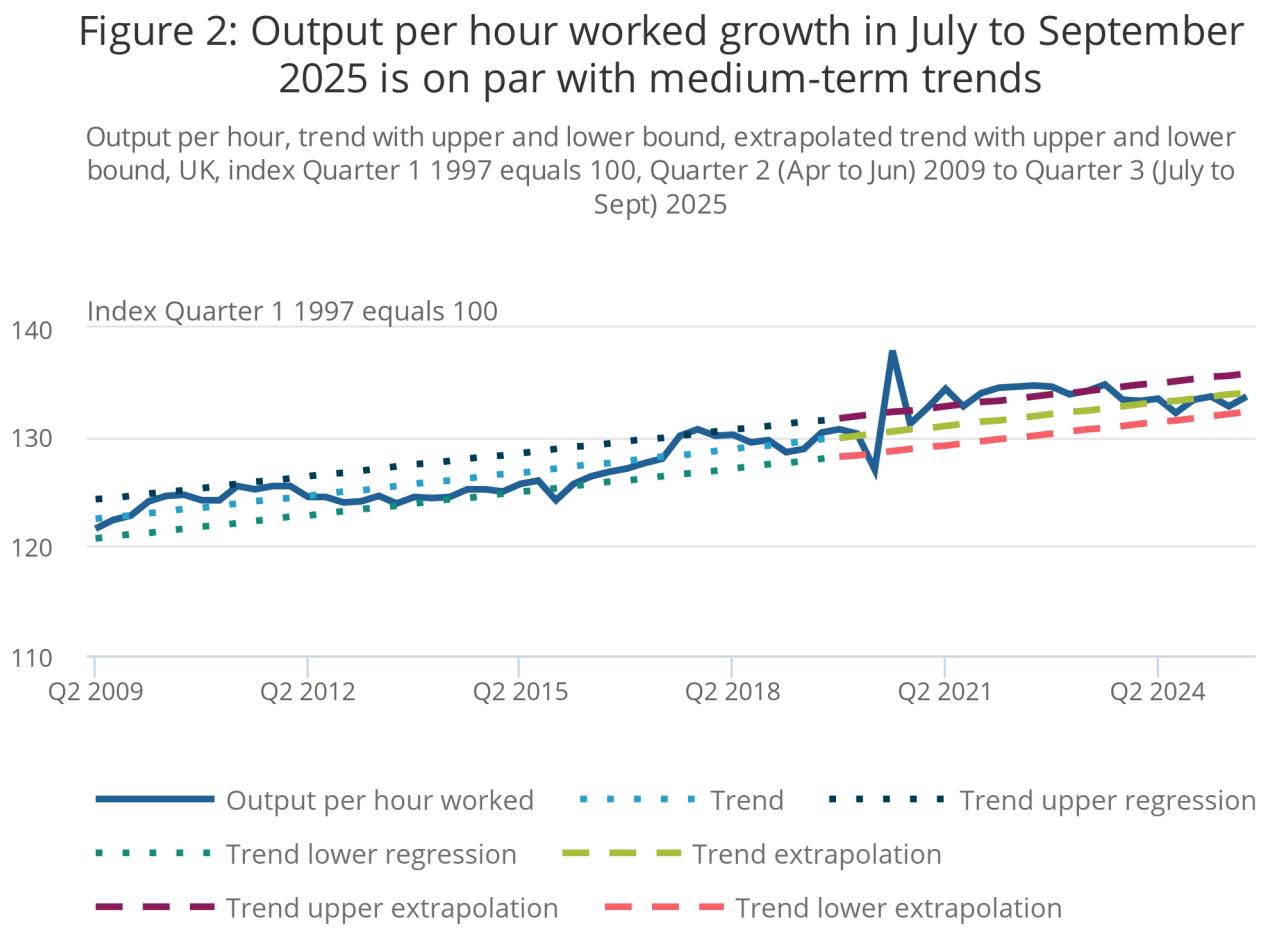
2. These trendlines are for visualisation purposes only and statistical inference should be treated with caution with the post-2019 points being an extrapolation.

3. These trendlines differ to the trendlines published in previous publications.

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

Figure 2: Output per hour worked growth in July to September 2025 is on par with medium-term trends

Output per hour, trend with upper and lower bound, extrapolated trend with upper and lower bound, UK, index Quarter 1 1997 equals 100, Quarter 2 (Apr to Jun) 2009 to Quarter 3 (July to Sept) 2025



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

Notes:

1. The trendline is constructed as in Figure 1.

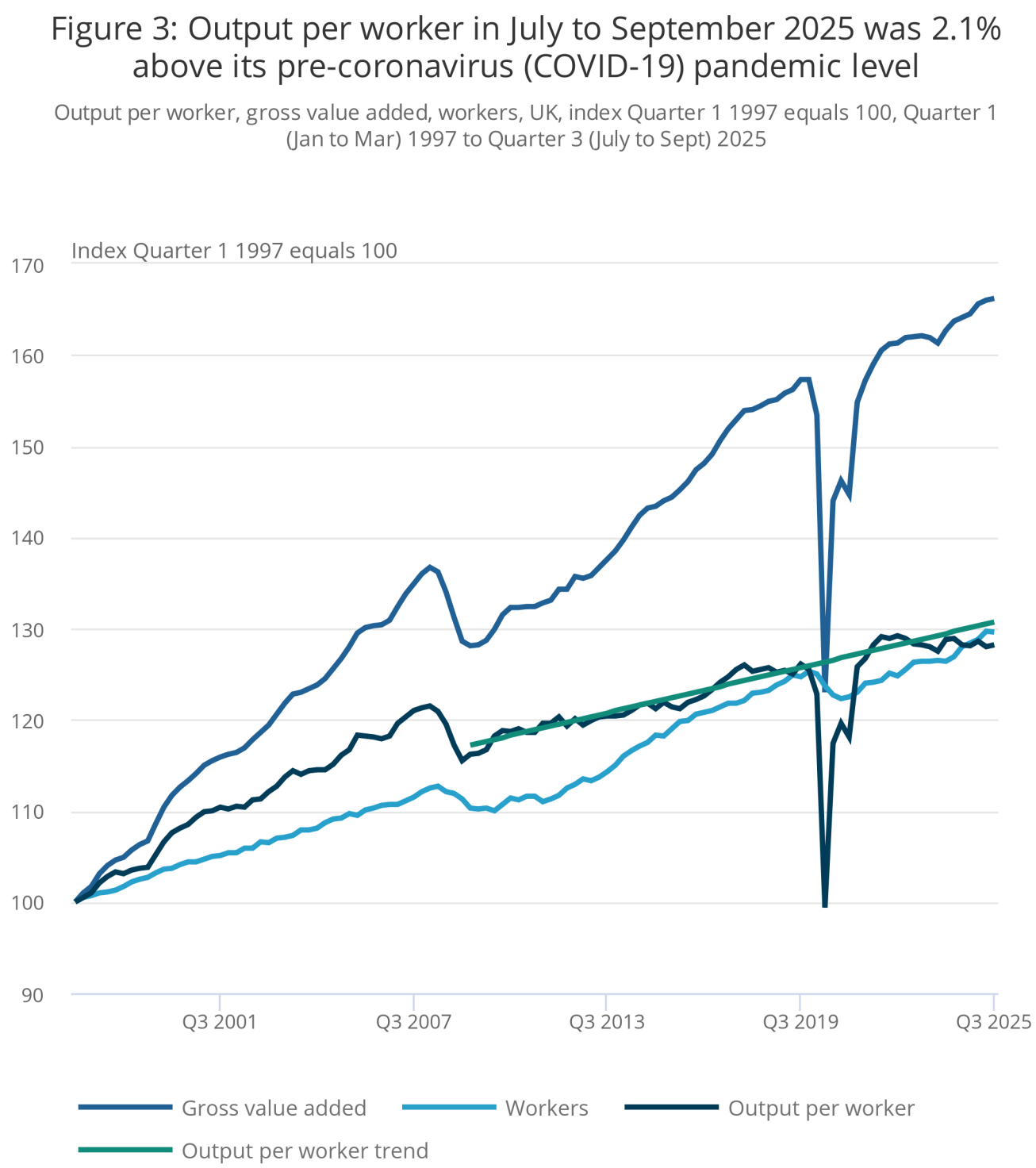
2. For information about how we construct confidence intervals in our figures, see Section 7: Data sources and quality.

Output per worker was 2.1% above its pre-coronavirus pandemic levels (2019 average level) in Quarter 3 2025, as shown in Table 1. This growth was caused by an increase in GVA of 6.1% and an increase in workers by 3.9% over the period.

Output per worker growth was 0.0% in Quarter 3 2025 compared with the same quarter a year ago. This is because GVA increased at a similar rate to the number of workers (1.3% and 1.2%, respectively).

Figure 3: Output per worker in July to September 2025 was 2.1% above its pre-coronavirus (COVID-19) pandemic level

Output per worker, gross value added, workers, UK, index Quarter 1 1997 equals 100, Quarter 1 (Jan to Mar) 1997 to Quarter 3 (July to Sept) 2025



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

Notes:

1. The trendline is constructed as in Figure 1.

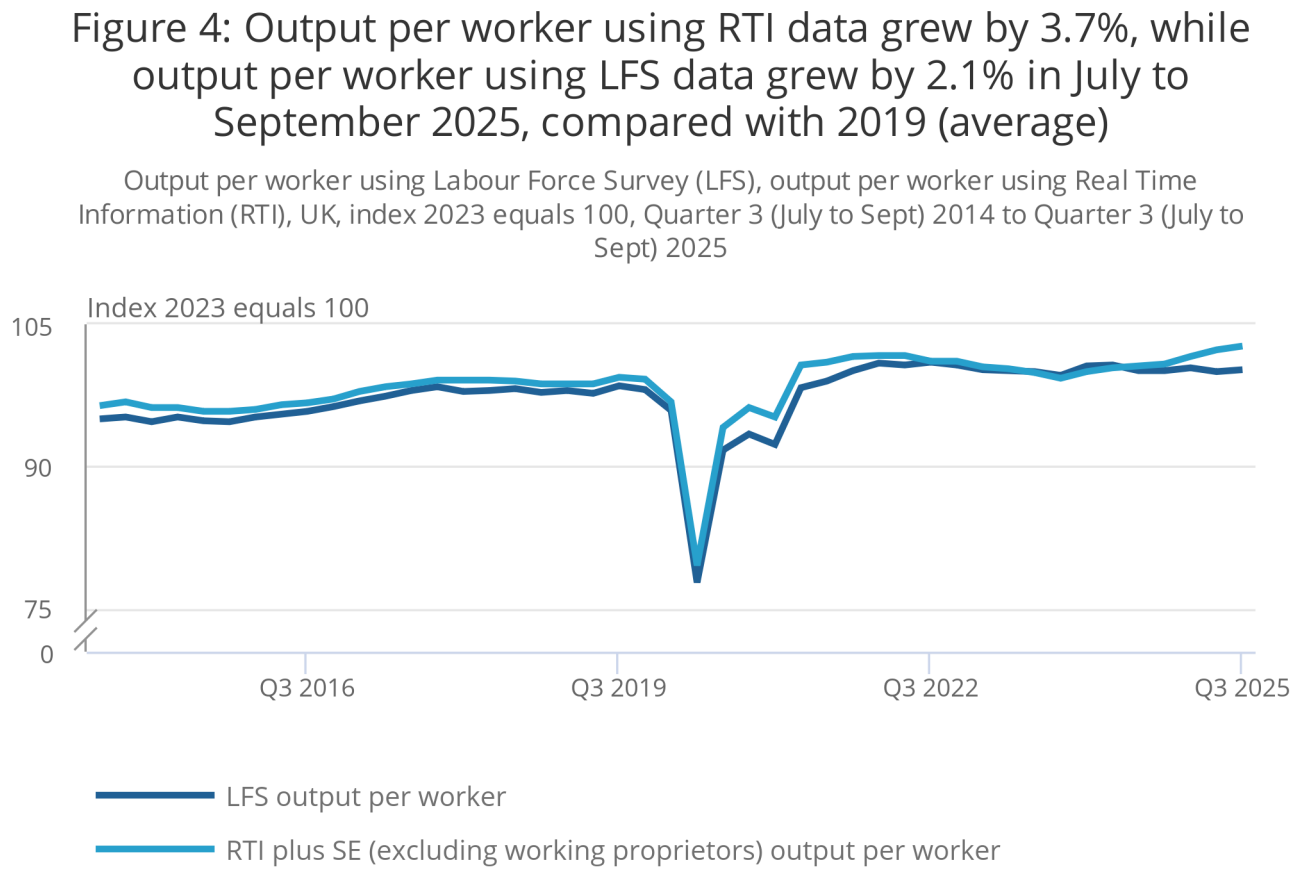
3 . Flash estimates, produced using administrative data methods, with different data sources

For information on our Real Time Information (RTI) method please see Section 3 of our Productivity flash estimate and overview, UK: January to March 2025 and October to December 2024 article. Users should be aware the estimates within this section are official statistics in development. Additionally, Deputy Chief Economist Richard Heys' blog provides context about which source of information on jobs and working patterns should be used to best estimate changes in productivity.

Figure 4 shows that the latest output per worker quarterly estimates, calculated using the Labour Force Survey (LFS) and the RTI, are diverging. The RTI measure increased by 3.7%, while the LFS measure increased by 2.1%, when comparing Quarter 3 (July to Sept) 2025 for each series with their 2019 average.

Figure 4: Output per worker using RTI data grew by 3.7%, while output per worker using LFS data grew by 2.1% in July to September 2025, compared with 2019 (average)

Output per worker using Labour Force Survey (LFS), output per worker using Real Time Information (RTI), UK, index 2023 equals 100, Quarter 3 (July to Sept) 2014 to Quarter 3 (July to Sept) 2025



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

Notes:

1. Real Time Information (RTI) worker estimate supplemented by Labour Force Survey (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.

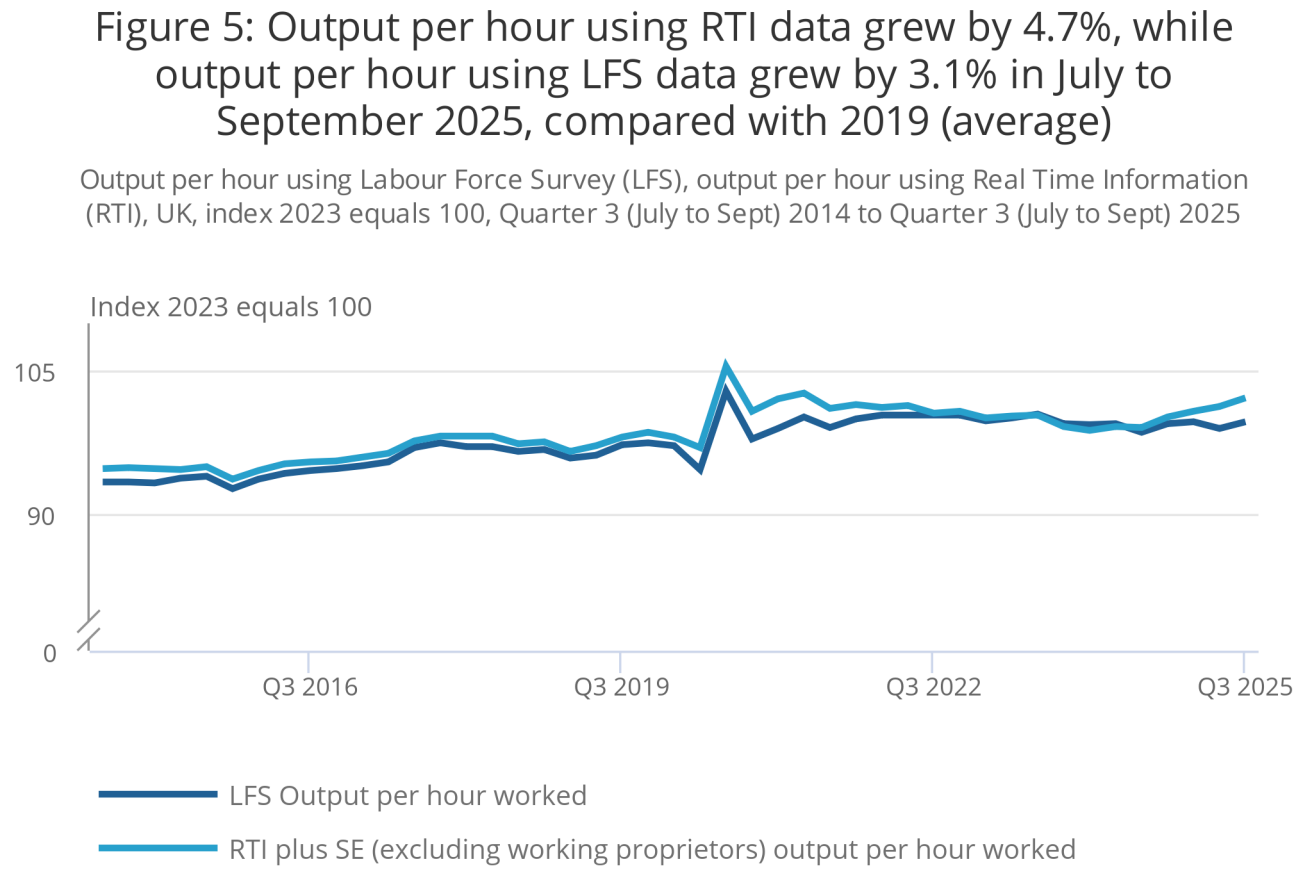
As RTI does not collect actual hours worked, the whole-economy hours worked for both the RTI and the LFS is calculated by multiplying LFS average hours worked with the number of workers, as shown in Figure 5. By varying the data source for workers, the impact on output per hour can be observed, given 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. Since Quarter 4 (Oct to Dec) 2023, the LFS series has remained largely flat, while PAYE has continued to record sustained growth. From 2014 to 2022 there can be observed a fairly consistent difference in the level of the LFS and RTI data. From 2022 to 2024 the series converged, although as the LFS has improved in quality as a data source there appears to be some evidence that the difference in levels terms between the two series is returning. Comparing quarterly movements, the two data series, however, show broadly similar trends and comparable levels of volatility.

Again, users should be cautious not to over-interpret these results. PAYE data may better compare with economic theory. This would anticipate the economic consequences of the supply shock induced by the Russian invasion of Ukraine, which could cause productivity to fall before it recovers. However, a relatively small movement in either series in coming 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 grew by 4.7%, while output per hour using LFS data grew by 3.1% in July to September 2025, compared with 2019 (average)

Output per hour using Labour Force Survey (LFS), output per hour using Real Time Information (RTI), UK, index 2023 equals 100, Quarter 3 (July to Sept) 2014 to Quarter 3 (July to Sept) 2025



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

4 . Labour productivity by industry section for Quarter 2 2025

The results in this article are consistent with labour market data from our Labour market overview, UK: October 2025. The gross value added (GVA) used within this section is from our GDP quarterly national accounts, UK: April to June 2025 and includes the Blue Book 2025 revisions.

Bluebook 2025 changes to productivity

Within our Blue Book 2025: advanced aggregate estimates article we showcased the annual and quarterly impacts on the 2025 UK National Accounts and productivity from recent methodological improvements, and new survey and administrative information. We are now able to confirm these statistics have not changed.

In real terms, productivity levels (measured as output per hour, per job, and per worker) have been revised upward by an average of 8.0% across the whole economy since Quarter 1 (Jan to Mar) 1997. This reflects a level shift in the series, rather than a change in quarterly growth rates.

Output per hour annual growth is now estimated to have fallen by 0.39% in 2023, revised up from the previous estimated fall of 0.42%, shown in Figure 17 of our Blue Book 2025: advanced aggregate estimates article. This is as published in our Output per hour worked, UK dataset as part of our Productivity flash estimate and overview, UK: April to June 2025 and January to March 2025.

Annual output per worker growth is now estimated to have fallen by 0.80% in 2023, revised up from our published estimate fall of 0.83%.

Contribution to UK productivity growth and decomposition

Figure 6 shows the contribution to growth in output per hour worked for 19 industries in Quarter 2 (Apr to June) 2025, relative to 2019 (average).

The information and communication industry made the largest upward contribution to productivity growth in comparison with 2019 (average). It also made the largest contribution to GVA growth in the service sector (alongside human health and social work). Annual survey data indicated higher levels of output and value added in 2023 than the short-term surveys, particularly in the computer services industry.

In human health and social work, the volume of output is continuing to grow, while intermediate consumption is continuing to fall, having been very high during the coronavirus (COVID-19) pandemic. However, a larger increase in the number of hours worked has had a negative effect on the productivity of the industry.

Financial and insurance activities made the largest negative contribution to productivity growth over the same period. This industry also had the largest negative contribution to growth in GVA in the service sector. Annual survey data indicate that intermediate consumption in the financial and insurance industry is rising more quickly than output, which squeezes the value added by these industries.

For more information on the annual and quarterly impacts on the 2025 UK National Accounts from recent methodological improvements, and new survey and administrative information, please see our GDP revisions in Blue Book: 2025 article.

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, or "between-industry effect", has made zero contribution to productivity growth in comparison with 2019 (average). When comparing Quarter 2 (Apr to June) 2025 with the same quarter a year ago, this is the seventh consecutive quarter that a negative reallocation effect has been measured. In other words, economic activity has shifted from industries with higher productivity to industries with lower productivity on average.

Figure 6: In Quarter 2 2025 the information and communication industry made the biggest upward contribution to output per hour compared with the 2019 average

Contribution to growth of output per hour worked, percentage points, Quarter 2 (Apr to June) 2025 compared with 2019 average

Notes

1. The industry contributions may not add up to the total growth in output per hour. This is because of 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 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.

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Figure 7 shows the decomposition of growth of output per hour worked. In the Information and communication industry the growth was mainly caused by an increase in GVA. The apparent large decrease in output per hour in the electricity, gas, steam and air conditioning supply industry should be treated with caution. We are aware that this series is subject to high volatility and we are investigating improvements to the method.

Figure 7: In Quarter 2 2025, the IT industry saw output per hour grow by 36.7% compared with the 2019 average because of a large increase in GVA (up from 29.2% a quarter ago and before Blue Book 25 revisions)

Decomposition of growth of output per hour worked, hours worked and gross value added (GVA), Quarter 2 (Apr to Jun) 2025 compared with 2019 average, percentage change, UK

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5 . Data on productivity flash estimate and overview

Output per hour worked, UK
Dataset | Released 13 November 2025
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 13 November 2025
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 13 November 2025
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 13 November 2025
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 13 November 2025
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 13 November 2025
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 bulletin, 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.

Pausing of Producer Prices publications

In our previous bulletin we reported on the pausing of Producer Prices publications. The full implementation of updated business prices data was managed in line with the national accounts revisions policy and the full time series update was included in our GDP quarterly national accounts, UK: April to June 2025 bulletin on 30 September 2025, and in our UK National Accounts, The Blue Book: 2025 release.

GVA measurement within healthcare

Several adjustments to output that were made to the January to March 2025 quarterly public service productivity estimates have since been incorporated into the national accounts.

Since the release of the Month 13 edition of the NHS England Hospital Episode Statistics (HES) covering April 2024 to March 2025, several important developments have taken place. The data were successfully integrated into the Quarterly National Accounts published at the end of September 2025. This update marked the first time the revised and complete HES dataset for the 2024 to 2025 financial year was reflected in national output figures.

The incorporation of this dataset led to an upward revision in healthcare output estimates for the period from Quarter 2 (Apr to June) 2024 to Quarter 1 (Jan to Mar) 2025. The changes reflected improved coverage and more accurate reporting of elective, non-elective, and outpatient activities.

Additionally, adjustments were introduced into the national accounts to account for changes in same-day emergency care (SDEC) activity. This was often logged as non-elective care, but many trusts have now transitioned to classifying it as emergency care. This change had created inconsistencies in the calculation of output growth across time, which has now been accounted for. These updates helped produce more accurate estimates of non-elective care output, with a particular upward revision for the early 2025 data.

Looking ahead, we plan to include further refinements to healthcare output in our December 2025 data updates. These will precede the full 2026 Blue Book revisions, which will provide a more definitive assessment of public sector output over 2025.

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: October 2025 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 ourActual 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 Blue Book 2025. Please emailproductivity@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 our user needs, please email productivity@ons.gov.uk with any feedback on our statistics.

8 . Related links

GDP first quarterly estimate, UK: July to September 2025
Bulletin | Released 13 November 2025
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: November 2025
Bulletin |11 November 2025
Estimates of employment, unemployment, economic inactivity, and other employment-related statistics for the UK.

GDP quarterly national accounts, UK: April to June 2025
Bulletin | Released 30 September 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: November 2025
Bulletin | Released 11 November 2025
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: April to June 2025
Bulletin | Released 3 November 2025
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 statistical bulletin

Office for National Statistics (ONS), released 13 November 2025, ONS website, statistical bulletin, Productivity flash estimate and overview, UK: July to September 2025 and April to June 2025