Office for National Statistics

Article

Productivity flash estimate and overview, UK: April to June 2025 and January to March 2025

Productivity flash estimates for Quarter 2 (Apr to June) 2025, based on the GDP first quarterly estimate and labour market statistics, and productivity overview for Quarter 1 (Jan to Mar) 2025.

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1 . Main points

Flash estimate of labour productivity for Quarter 2 (Apr to June) 2025

- Estimates based on the Labour Force Survey (LFS) indicate that output per hour worked in Quarter 2 (Apr to June) 2025 was 1.5% higher, compared with pre-coronavirus (COVID-19) pandemic levels (2019 average), while output per worker was 1.1% 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 2.9% and 2.5% higher, respectively, compared with pre-coronavirus pandemic levels (2019 average).
- Despite showing similarities when compared with the 2019 average, LFS and RTI derived estimates show some divergence in the most recent time periods, which we continue to monitor.

Labour productivity by industry section for Quarter 1 (Jan to Mar) 2025

- In comparison with the 2019 average, the information and communication industry made the biggest positive contribution to productivity growth, caused by an increase in gross value added (GVA).
- In comparison with the 2019 average, the health industry made the biggest negative contribution to productivity growth, caused by an increase in the number of hours worked alongside a smaller fall in output.
- When comparing the current quarter against the same quarter a year ago, this is the sixth consecutive quarter that a negative reallocation effect has been measured; this shows that economic activity on average has shifted from industries with higher productivity to industries with lower productivity.

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

We recommend users place less weight on the quarter-on-year metric for this quarter because the base period Quarter 2 (Apr to June) 2024 is affected by low response rates in the Labour Force Survey (LFS). Subsequent periods will benefit from strengthening LFS sample sizes and we will keep users informed of the relative quality of quarter-on-year comparisons. On 13 May 2025 we published our Labour Force Survey quality update: May 2025 article providing users with information to help them understand the current quality of the data, and guidance on the best way to use the data in their analysis.

Output per hour worked was 1.5% above its pre-coronavirus (COVID-19) pandemic levels (2019 average) in Quarter 2 2025, as shown in Table 1. This growth was caused by an increase in gross value added (GVA) of 5.1% and an increase in hours worked by 3.5% over the period.

Output per hour worked was lower (negative 0.8%) in Quarter 2 2025 than in the same quarter a year ago. This is because hours worked increased more than GVA (2% and 1.1%, respectively).

Table 1: Flash estimate of labour productivity, using LFS sources
UK, Quarter 2 (Apr to June) 2024 to Quarter 2 2025

	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 (%)
Period						
2024 Q2	2.3	-0.5	0.0	2.1	0.7	0.0
2024 Q3	1.1	-2.1	-1.2	1.3	-0.1	-0.8
2024 Q4	1.9	-0.5	0.7	1.1	0.0	-0.2
2025 Q1	2.2	-0.2	0.3	1.5	-0.7	0.4
2025 Q2	1.5	-0.8	-0.6	1.1	-1.0	-0.4

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.

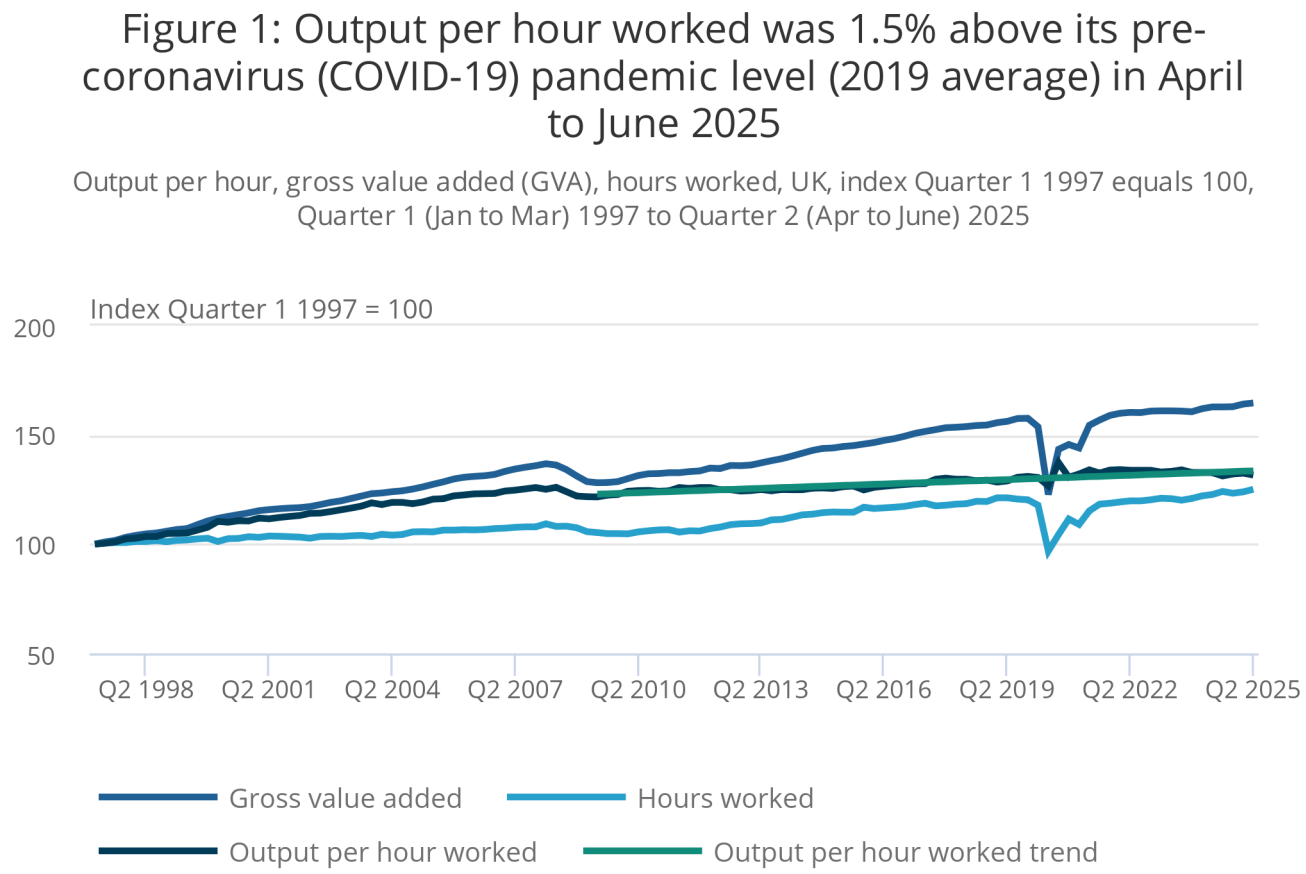
The pandemic had a substantial short-term effect on the growth rate of productivity. Unlike most "standard" recessions that show a subsequent fall in productivity (such as the financial downturn in 2008 to 2009), the growth rate rapidly bounced back to the trend rate.

The 2009 to 2019 trend, which appears stronger than recent out-turns, was historically weak and is commonly described as the "productivity puzzle". The recent movements in productivity since the pandemic suggest this underlying weakness in UK productivity growth continues to worsen.

In more recent quarters, Figure 1 shows that productivity growth has slowed, demonstrating weaker than trend growth. However, it is important to not ”over-interpret” this information. When comparing the 2011 to 2016 period, a similar path to that experienced since 2021 can be seen. 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 1.5% above its pre-coronavirus (COVID-19) pandemic level (2019 average) in April to June 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 2 (Apr to June) 2025



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

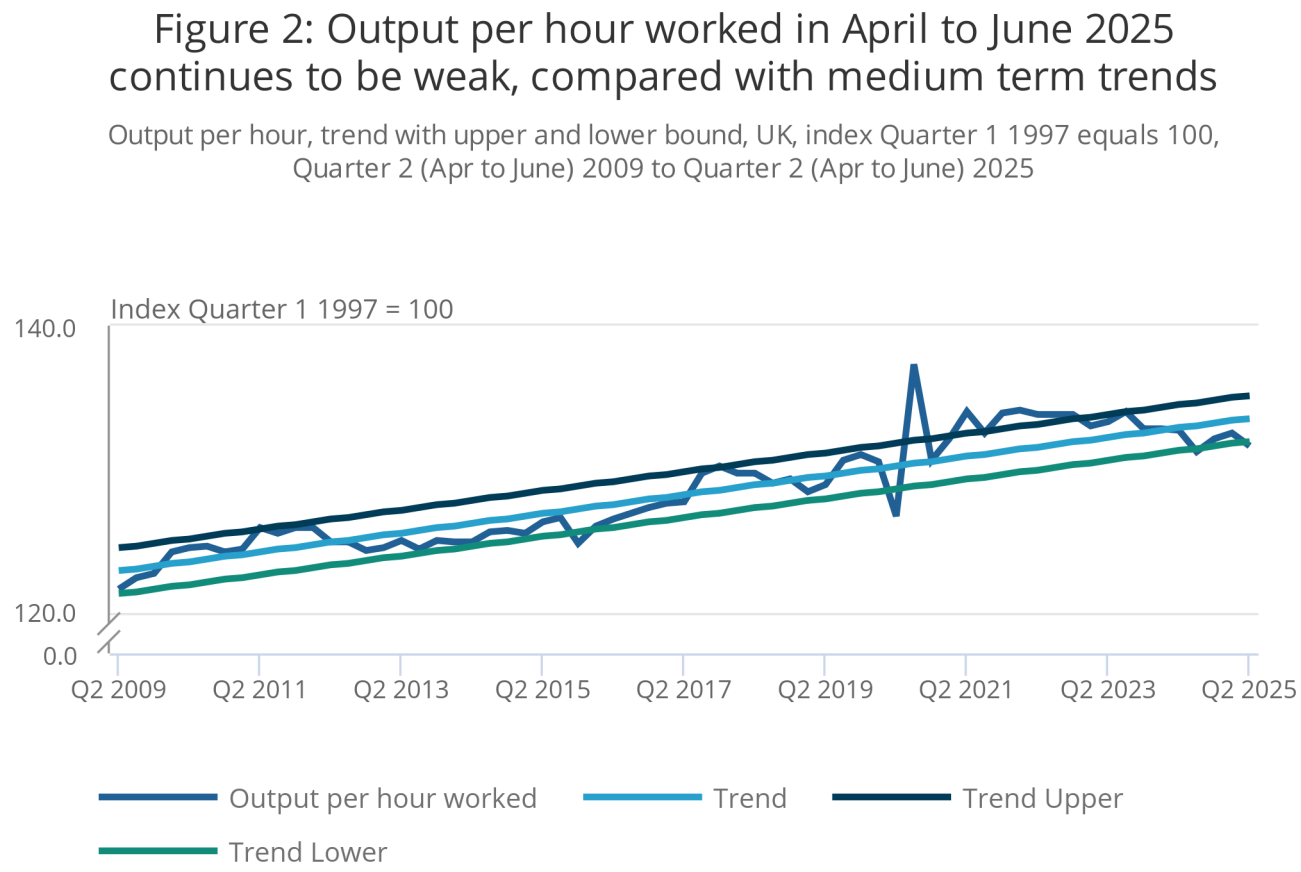
Notes:

1. The output per hour trendline was constructed using a linear regression of the period 2009 Q1 – 2019 Q4 using the Cochrane-Orcutt (CO) estimation as described in our article Productivity trends in the UK: July to September 2024. These trendlines are for visualisation purposes only and statistical inference should be treated with caution, with the post 2019 points being an extrapolation. 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 2019 to contextualise growth. We have then further extrapolated these up to the most recent period. Output per hour worked is outside the lower bound of the 95% confidence interval for the first quarter since Quarter 3 (July to Sept) 2024, although it is worth noting that in the period after the pandemic the series exceeded the upper confidence interval for prolonged periods (up to six quarters), which may imply greater volatility in the series in more recent quarters.

Figure 2: Output per hour worked in April to June 2025 continues to be weak, compared with medium term trends

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



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

Notes:

1. The trendline is constructed as in Figure 1.

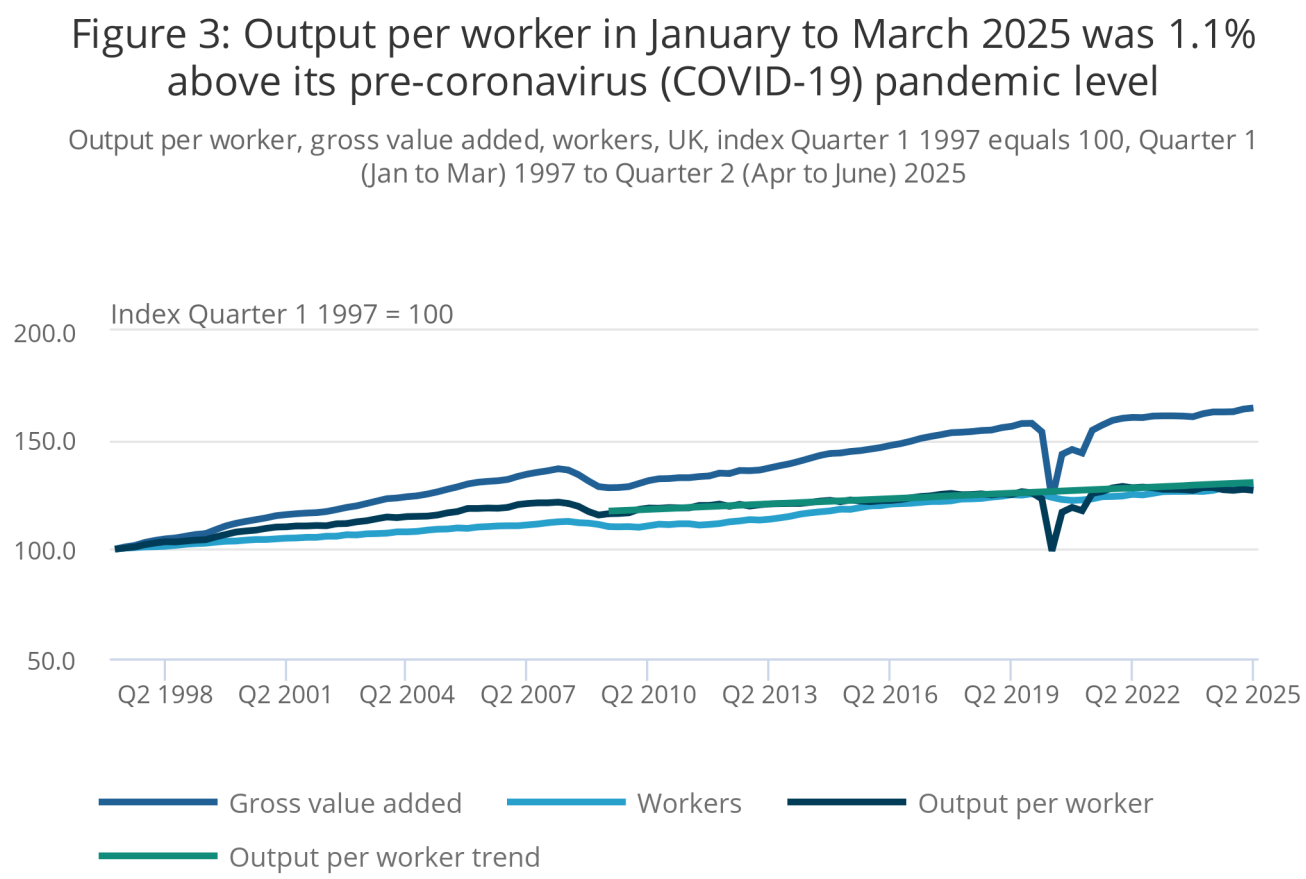
2. For information about how we construct confidence intervals in our figures, see Section 7: Data sources and quality.

Output per worker was 1.1% above its pre-coronavirus (COVID-19) pandemic levels (2019 average) in Quarter 2 2025, as shown in Table 1. This growth was caused by an increase in gross value added (GVA) of 5.1% and an increase in workers by 39% over the period.

Output per worker was lower (negative 1.0 %) in Quarter 2 2025 than in the same quarter a year ago. This is because the number of workers increased more than GVA (2.2% and 1.1%, respectively).

Figure 3: Output per worker in January to March 2025 was 1.1% 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 2 (Apr to June) 2025



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

Notes:

1. The trendline is constructed as in Figure 1.

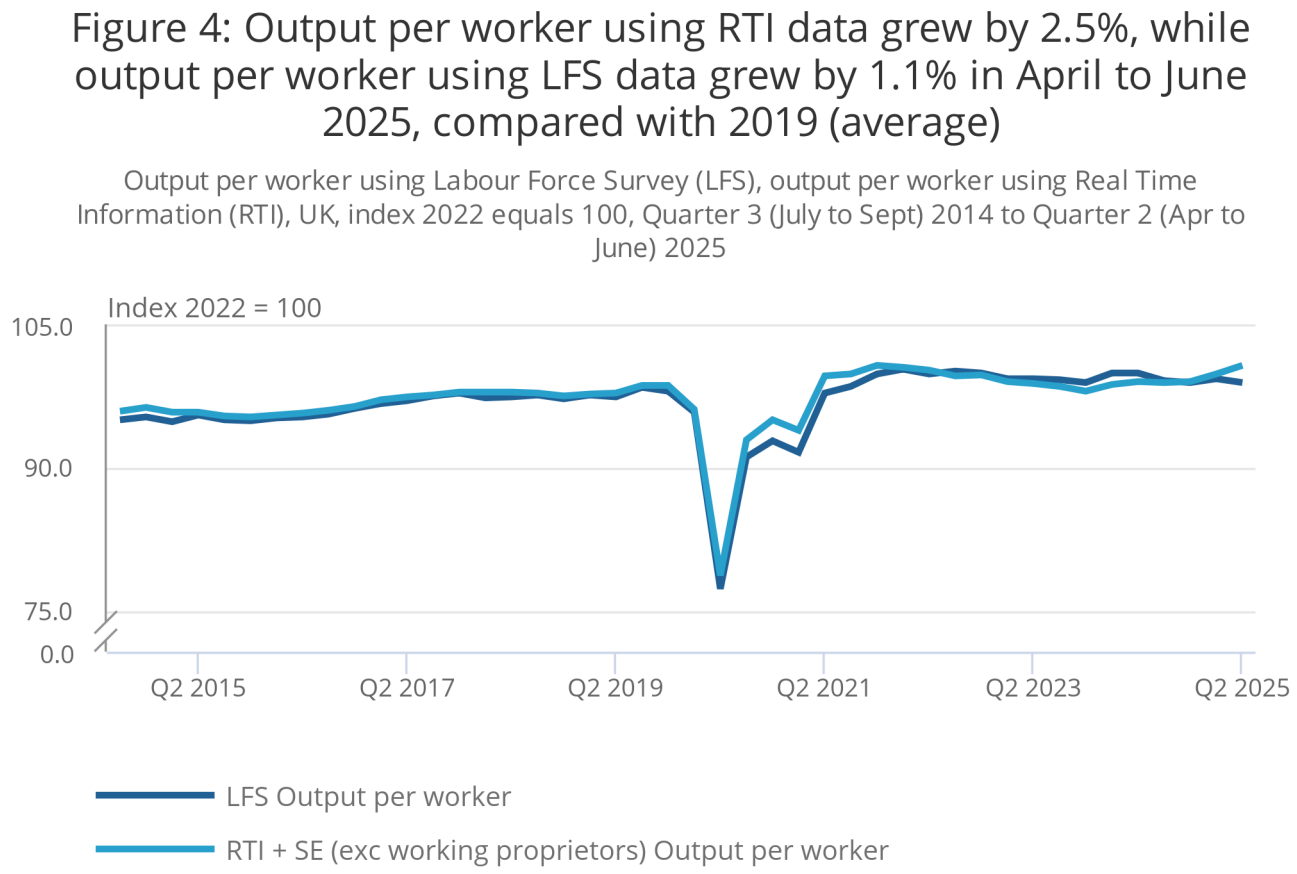
3 . Flash estimates, produced using administrative data methods, with different data sources

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 bulletin. Users should be aware 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 begun to diverge. The RTI increased by 2.5%, while the LFS increased by 1.1%, when comparing Quarter 2 (Apr to June) 2025 for each series with their 2019 average.

Figure 4: Output per worker using RTI data grew by 2.5%, while output per worker using LFS data grew by 1.1% in April to June 2025, compared with 2019 (average)

Output per worker using Labour Force Survey (LFS), output per worker using Real Time Information (RTI), UK, index 2022 equals 100, Quarter 3 (July to Sept) 2014 to Quarter 2 (Apr to June) 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.

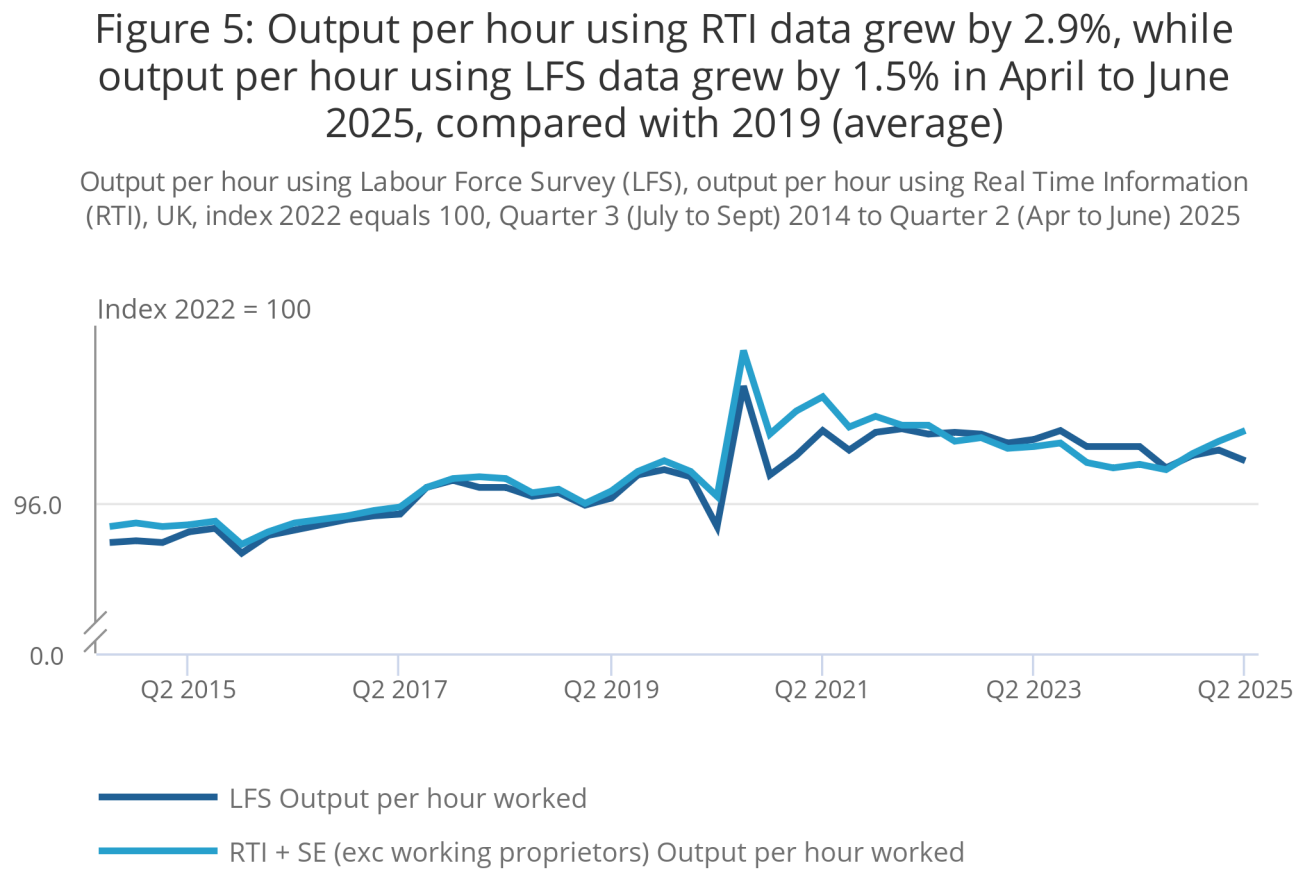
We have seen a recent divergence between output per hour calculated using the LFS and output per hour calculated using RTI in the beginning of 2025.

These estimates provide evidence that these two series, before the coronavirus (COVID-19) pandemic period, moved around similar underlying trends leading to short-term variations between the two, although the two series share similar volatility patterns. Since the pandemic we have seen more pronounced differences for short periods before the two datasets converged. Most recent quarters demonstrate stronger growth from the Pay As You Earn (PAYE) metric than the LFS metric. When comparing growth since Quarter 4 (Oct to Dec) 2023 there are two different trends - the LFS shows flat growth and PAYE shows more sustained growth.

Caution should be applied to not ”over-interpret” these results. It is possible to argue that the PAYE data may compare better with economic theory which would anticipate that the economic consequences of the supply shock induced by the Russian invasion of Ukraine would dampen productivity before it recovers. However, a relatively small movement in either series in coming quarters could close, or widen, these differences radically. We continue to encourage users who wish to raise questions around the exact composition of these metrics to contact productivity@ons.gov.uk.

Figure 5: Output per hour using RTI data grew by 2.9%, while output per hour using LFS data grew by 1.5% in April to June 2025, compared with 2019 (average)

Output per hour using Labour Force Survey (LFS), output per hour using Real Time Information (RTI), UK, index 2022 equals 100, Quarter 3 (July to Sept) 2014 to Quarter 2 (Apr to June) 2025



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

4 . Labour productivity by industry section for Quarter 1 2025

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

Figure 6 shows the contribution to growth in output per hour worked for 19 industries in Quarter 1 (Jan to Mar) 2025, relative to 2019 (average).

The IT industry made the largest upward contribution to productivity growth compared with 2019 (average). The health industry made the largest negative contribution to productivity growth over the same period, however, revisions are expected within this sector. Please see the volatility of GVA measurement within the GVA measurement within healthcare subsection of Section 7: Data sources and quality.

Even when every industry experiences 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 a positive contribution to productivity growth in comparison with 2019 (average). This shows that economic activity has shifted from industries with lower productivity to industries with higher productivity, on average. However, when comparing the current quarter against the same quarter a year ago, this is the sixth consecutive quarter that a negative reallocation effect has been measured.

Figure 6: In Quarter 1 (Jan to Mar) 2025 the information and communication industry made the biggest upward contribution to output per hour in comparison with the 2019 average

Contribution to growth of output per hour worked, percentage points, Quarter 1 (Jan to Mar) 2025 compared with 2019 average

Downloac

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. In the agriculture and construction industries, growth in output per hour worked was mainly caused by a decrease in the number of hours worked. In the IT and administrative services industries, the growth was mainly caused by an increase in gross value added (GVA).

Figure 7: In Quarter 1 (Jan to Mar) 2025 the agriculture, forestry and fishing industry and the IT industry saw output per hour grow by 29.2% and 18.4% respectively in comparison with 2019 average

Decomposition of growth of output per hour worked, hours worked and gross value added (GVA), Quarter 1 (Jan to Mar) 2025 compared with 2019 average, percentage change, UK

Downloac

5 . Data on productivity flash estimate and overview

Output per hour worked, UK
Dataset | Released 14 August 2025
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 August 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 14 August 2025
Estimates for gross value added (GVA), jobs and output per job 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 14 August 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 14 August 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 14 August 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.

Pausing of Producer Prices publications

Business prices data with corrected chain linking methods have been used in this release for producer price indices (PPI), import prices indices (IPI) and export price indices (EPI). These data have now been used from January 2025 onwards in the monthly GDP dataset.

Corrected service producer price indices (SPPI) have not been included. Further analysis will be made on the corrected SPPI dataset. We intend to include this in our GDP monthly estimate, UK: June 2025 bulletin, and in our GDP first quarterly estimate, UK: April to June 2025 bulletin, published on 14 August 2025.

The full implementation of updated business prices data will be managed in line with the national accounts revisions policy, with the full time series update being included in our GDP quarterly national accounts, UK: April to June 2025 bulletin on 30 September 2025, and in our Blue Book 2025 release.

Further information on the chain linking error in the producer prices dataset are detailed in our Methods update for Producer Price Indices (PPI) and Service Produce Prices Indices (SPPI) published on 10 July 2025.

Gross value added measurement within healthcare

While typically non market sector labour productivity measures in this bulletin broadly align to public sector quarterly productivity, our measure of output will cause divergence as the latest public sector productivity estimates account for:

- revisions in recently published NHS activity data
- changes in the way NHS providers report non-elective care activity

We used the recently published month 13 edition of the NHS England Hospital Episodes Statistics (HES) which revises estimates of activity for elective care, non-elective care, and outpatient activity between April 2024 and March 2025. These data were not available for the latest national accounts, whereas public sector productivity were able to use this vintage of data to calculate output estimates for their productivity estimates.

The month 13 vintage of data represents the final published version of HES data for the financial year ending 2025 and will be introduced to GDP quarterly national accounts at the next available opportunity on 30 September 2025, in line with the national accounts revisions policy. This represents an upward revision to estimates of healthcare output between Quarter 2 (Apr to June) 2024 and Quarter 1 (Jan to Mar) 2025.

For Quarter 1 2025 estimates within this bulletin, we have not applied an adjustment to estimates of non-elective care output to account for changes in the way some NHS providers report same-day emergency care (SDEC). While SDEC was commonly reported as non-elective care up to 2024, an increasing number of NHS trusts now report activity as emergency care.

We are working closely with the Department of Health and Social Care and NHS England to identify and remove the affected NHS providers, when calculating an aggregate growth in quarter-on-quarter activity. This helps mitigate the impact of reporting differences on estimates of output growth. Changes will cause an upward revision to estimates of output from Quarter 1 2024 onwards, when they are introduced to the national accounts in September 2025. We will continue to work closely with data experts to monitor and compensate for this trend.

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, 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: August 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, for the purposes of the productivity estimates; they are not part of the labour market release. Therefore, the adjusted productivity jobs and the adjusted productivity hours worked diverge from the estimates in our Full-time, part-time and temporary workers dataset and our Actual weekly hours worked dataset from 2011 to 2019 provided in August 2025 alongside our Labour market overview, UK: August 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, for the purposes of the productivity estimates; 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.

Imputed rental is excluded from "Industry L: real estate". For "Industry B: mining and quarrying", employee average hours are calculated at section level.

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.

We have now updated our trendlines, based on research we published in our Productivity trends in the UK: July to September 2024 article. If you would like to share your comments or views, please email productivity@ons.gov.uk.

Accredited official statistics

Our gross valued added (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. 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 about our publication changes.

8 . Related links

GDP first quarterly estimate, UK: April to June 2025
Bulletin | Released 14 August 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 - Office for National Statistics
Bulletin |12 August 2025
Estimates of employment, unemployment, economic inactivity, and other employment-related statistics for the UK.

GDP quarterly national accounts, UK
Bulletin | Released 14 August 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: August 2025
Bulletin | Released 12 August 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 - Office for National Statistics
Bulletin | Released 28 July 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 14 August 2025, ONS website, statistical bulletin, Productivity flash estimate and overview, UK: April to June 2025 and January to March 2025