

Statistical bulletin

Unit labour costs, UK: January to March 2019

Unit labour costs and sectional unit labour costs estimates for the whole economy and a range of industries.



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8 October 2019

Notice

5 July 2019

This is the first stand-alone release focusing on unit labour costs (ULC) and sectional unit labour costs (SULC).

These estimates were previously published in the quarterly labour productivity bulletin. The ONS has changed the content of the quarterly labour productivity release. Data and commentary associated with this release and labour productivity will be presented differently from 5 July 2019.

More information can be found in [Improving the presentation of the labour productivity release: July 2019](#) article.

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1 . Main points

- This is the first stand-alone bulletin presenting unit labour costs (ULC) and sectional unit labour costs (SULC); ULCs are National Statistics which represent how wages and other labour costs facing companies are growing relative to productivity. Sectional unit labour costs are experimental statistics.
- ULCs increased by 2.1% in Quarter 1 (Jan to Mar) 2019, compared with the same quarter a year ago, as labour costs grew and labour productivity fell.
- Whole economy unit wage costs increased by 1.8% compared with Quarter 1 2018, while manufacturing unit wage costs saw no growth during the same period.
- SULCs in services grew by 1.9% in Quarter 1 2019, compared with the same quarter a year ago as a result of labour costs per hour increasing faster than output per hour.
- SULCs in manufacturing grew by 3.2% in Quarter 1 2019, compared with the same quarter a year ago as a result of an increase in the labour costs growth and a fall in output per hour.

2 . Analysis of whole economy unit labour costs in the post-downturn period

Compared with the same quarter a year ago, unit labour costs (ULCs) increased by 2.1% in Quarter 1 (Jan to Mar) 2019, which means we have observed growth above 2% for six consecutive quarters.

Figure 1 shows ULCs quarter-on-year log growth since Quarter 3 (July to Sept) 2009. Holding other factors constant, increasing output per hour reduces ULCs and the other way around. As a result, output per hour growth has its sign reversed in Figure 1. In this presentation, positive output per hour growth has a negative effect on ULC growth, while negative output per hour growth has a positive effect on ULC growth.

While quarter-on-year growth in ULCs has been broadly positive since the onset of the economic downturn, since Quarter 3 2009, there has been substantial variation during this period. During the recent economic downturn, ULCs began to grow at a relatively high rate, reaching a peak of 4.8% by Quarter 3 2009. Figure 1 shows that in the initial post-downturn, ULCs demonstrated strong growth, driven by large growth in labour costs per hour.

From Quarter 1 2010, as labour costs per hour growth declined, it was reflected in a two-year period from Quarter 2 (Apr to June) 2010 to Quarter 1 2012, where ULCs growth fluctuated between weak and negative growth. That was the first of the two periods where ULCs experienced poor growth, the second being Quarter 1 2014 to Quarter 1 2015. It is the only period where labour costs per hour had consistent negative growth.

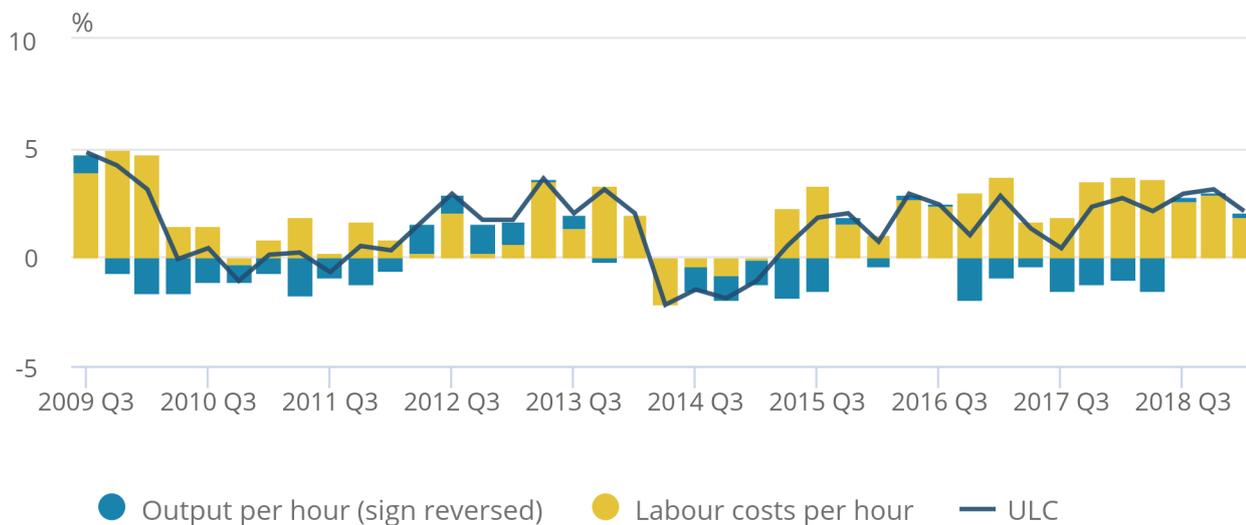
Since Quarter 2 2015, ULCs have had 16 consecutive quarters of positive growth, averaging 2%. This increase broadly reflects higher hourly labour costs growth, with relatively offsetting output per hour growth.

Figure 1: Whole economy unit labour costs increased by 2.1% compared with the same quarter a year ago

Whole economy unit labour costs, quarter on year growth rates, seasonally adjusted, UK, Quarter 3 (July to Sept) 2009 to Quarter 1 (Jan to Mar) 2019

Figure 1: Whole economy unit labour costs increased by 2.1% compared with the same quarter a year ago

Whole economy unit labour costs, quarter on year growth rates, seasonally adjusted, UK, Quarter 3 (July to Sept) 2009 to Quarter 1 (Jan to Mar) 2019



Source: Office for National Statistics

Notes:

1. Labour costs per hour estimates will differ from those in our index of Labour costs per hour bulletin, due to differences in methodology.

3 . Analysis of services and manufacturing sectional unit labour costs in the post-downturn period

Compared with the same quarter a year ago, sectional unit labour costs (SULCs) in services increased by 1.9%, with labour costs per hour growing faster than output per hour. This is marginally above the 1.3% average growth in SULCs in services since Quarter 3 (July to Sept) 2009.

Figure 2 shows the growth in SULCs for services compared with the same quarter a year ago, since Quarter 3 2009. The performance of SULCs in services can be split into before and after Quarter 2 (Apr to June) 2015. Since Quarter 2 2015, SULCs in services grew at a faster pace, with average growth after Quarter 2 2015 being more than double that of the period before Quarter 2 2015, at 2% and 1% respectively.

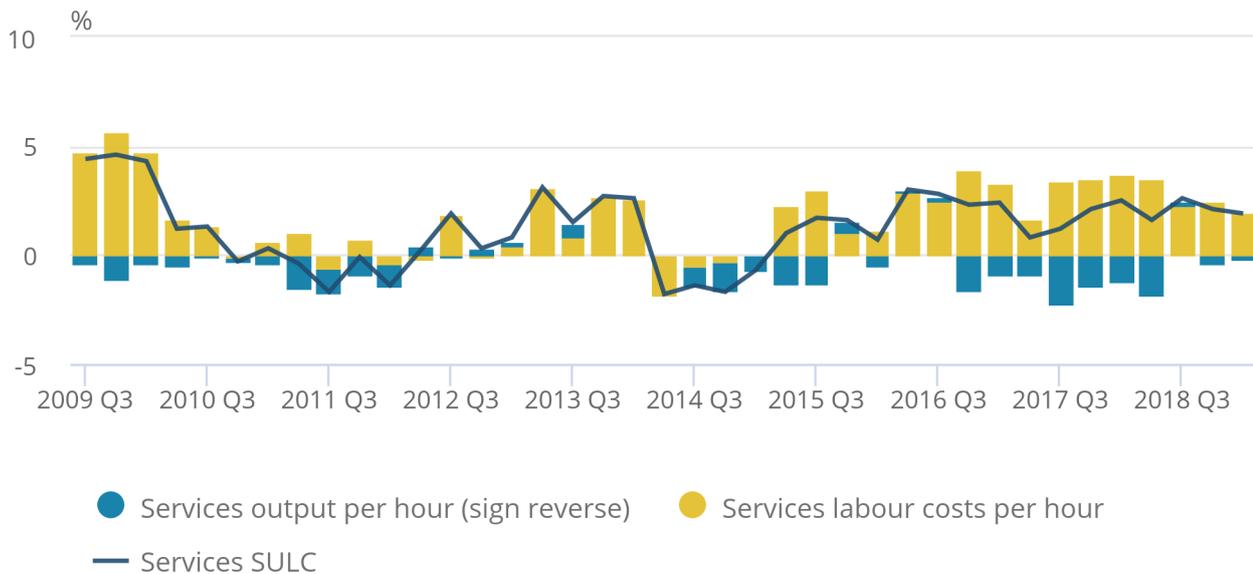
The performance of SULCs in services closely mirrors whole economy unit labour costs, as services accounts for nearly 80% of the hours worked and gross value added (GVA) generated in the whole economy.

Figure 2: Services sectional unit labour costs increased by 1.9% compared with the same quarter a year ago

Sectional unit labour costs, quarter on year growth rates, Quarter 3 (July to Sept) 2009 to Quarter 1 (Jan to Mar) 2019

Figure 2: Services sectional unit labour costs increased by 1.9% compared with the same quarter a year ago

Sectional unit labour costs, quarter on year growth rates, Quarter 3 (July to Sept) 2009 to Quarter 1 (Jan to Mar) 2019



Source: Office for National Statistics

Notes:

1. Sectional unit labour costs estimates will differ from the National Statistic unit labour costs, due to differences in methodology.
2. Growth is measured as percentage log changes. Please see [section 6](#) for further information.

In Quarter 1 (Jan to Mar) 2019, SULCs in manufacturing increased by 3.2%, compared with the same quarter in the previous year. This was because of labour costs per hour growing nearly twice as fast compared with the falling growth in output per hour, at positive 2.2% and negative 0.9% respectively.

Figure 3 shows quarter-on-year growth rates for SULCs for manufacturing during the post-downturn period, since Quarter 3 2009. Growth in SULCs for manufacturing has shown more volatility than that of services, particularly during the period up to Quarter 2 2015.

Between Quarter 1 2010 and Quarter 1 2012, SULCs in manufacturing showed consecutive negative growth rates, averaging negative 1.4%. This then reversed during 2012 and 2013, where the highest growth for the period was recorded in Quarter 1 2013, at 9.3%. Growth in subsequent quarters continued to decrease, entering a period of negative growth from Quarter 1 2014 to Quarter 1 2015, during which the average growth rate was negative 2.3%.

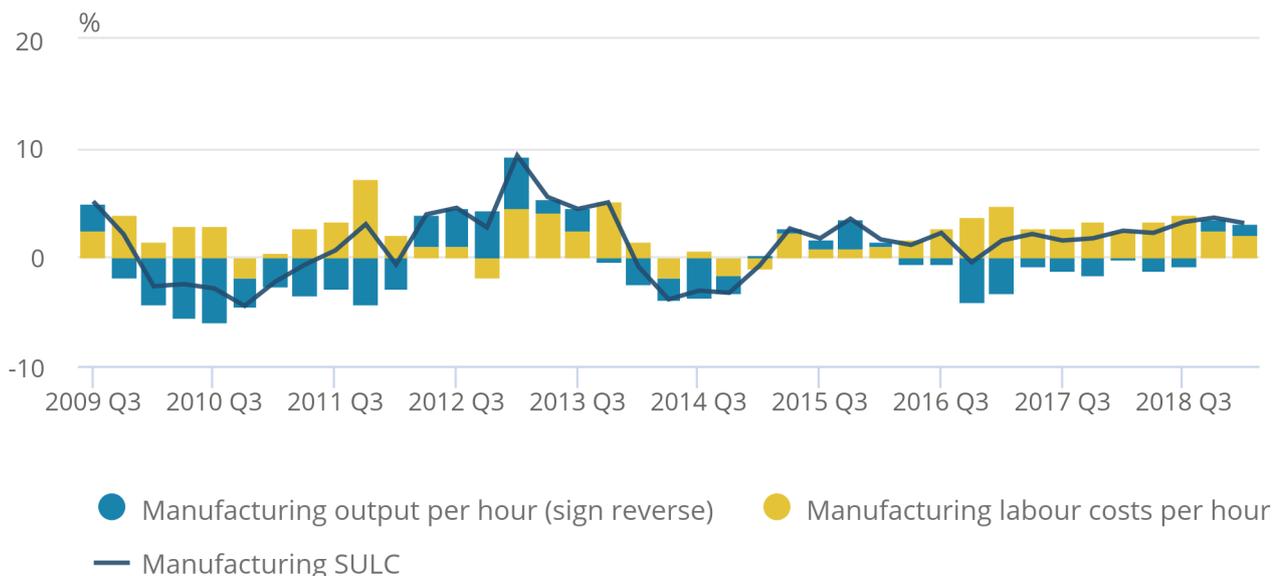
The drivers of the changing growth rates for SULCs in manufacturing are because of labour costs per hour increasing at a faster pace than output per hour and in some periods, output per hour is showing negative growth.

Figure 3: Manufacturing sectional unit labour costs increase by 3.1% compared with the same quarter a year ago

Sectional unit labour costs, quarter on year growth rates, Quarter 3 (July to Sept) 2009 to Quarter 1 (Jan to Mar) 2019

Figure 3: Manufacturing sectional unit labour costs increase by 3.1% compared with the same quarter a year ago

Sectional unit labour costs, quarter on year growth rates, Quarter 3 (July to Sept) 2009 to Quarter 1 (Jan to Mar) 2019



Source: Office for National Statistics

Notes:

1. Sectional unit labour costs estimates will differ from the National Statistic unit labour costs, due to differences in methodology.
2. Growth is measured as percentage log changes. Please see [section 6](#) for further information.

4 . Unit labour costs data

[Unit labour cost and unit wage cost time series](#)

Time series | Released 5 July 2019

Quarterly unit labour cost (ULC) and unit wage cost (UWC) for the whole UK economy and unit wage cost (UWC) for manufacturing industries.

[Labour productivity: sectional unit labour costs](#)

Dataset | Released 5 July 2019

Sectional unit labour costs and revisions from previously published estimates, UK.

[Unit labour costs: revisions triangles](#)

Dataset | Released 5 July 2019

Revisions triangles for unit labour costs, unit wage costs and unit wage costs in manufacturing. Data present the first estimates of chosen statistics used in the unit labour costs publication (and for the quarter before Quarter 1 (Jan to Mar) 2019 in the labour productivity publication) against later revised estimates. Includes first estimates and revisions.

5 . Glossary

Unit labour costs

Unit labour costs reflect the full labour costs, including social security and pension contributions paid by employers, which is incurred in the production of a unit of output.

Unit wage costs

Unit wage costs are a narrower measure of unit labour costs, as they exclude non-wage labour costs. They are the ratio of wages and salaries per employee to output per worker.

Unit wage costs for manufacturing

To measure unit wage costs for the manufacturing industry, average weekly earnings (AWE) for manufacturing are divided by manufacturing output per job.

6 . Measuring the data

Whole-economy unit labour costs (ULCs) are calculated as the ratio of total labour costs (that is, the product of labour input and costs per unit of labour) to gross value added (GVA). Further detail on the methodology can be found in [Revised methodology for unit wage costs and unit labour costs: explanation and impact](#).

The equation for growth of ULCs can be calculated as:

$$\Delta \text{ULC} = \Delta \left(\frac{\text{Labour Costs}}{\text{GVA}} \right) \approx \Delta \text{Labour Input} - \Delta \text{Labour Productivity}$$

Manufacturing unit wage costs are calculated as the ratio of manufacturing average weekly earnings to manufacturing output per filled job. On 28 November 2012, we published [Productivity measures: sectional unit labour costs](#), describing new measures of ULCs below the whole-economy level and proposing to replace the currently published series for manufacturing unit wage costs with a broader and more consistent measure of ULCs.

Following a methodology review, revised whole economy unit labour cost and unit wage cost estimates were implemented in the Quarter 2 (Apr to June) Labour productivity bulletin of October 2011. Details of the methodology review and its impact can be found in [Revised methodology for unit wage costs and unit labour costs: explanation and impact](#).

The article on [productivity measures: sectional unit labour costs](#) describes the methodology used to estimate ULCs below the whole-economy level and proposes to replace the currently published series for manufacturing unit wage costs with a broader and more consistent measure of ULCs.

Presentation of growth rates in log percentage changes

In this release charts 2 and 3 and their associated text measure growth in terms of percentage log changes and we will continue to use this presentation in future releases. The datasets will still contain the percentage growth rates and it is these statistics that hold the National Statistics status.

For typical rates of change for labour productivity and labour inputs, this change will not make much difference to the result. For example, a 2.0% percentage change translates to a 1.98% log change. We are adopting the approach because a log change between two observations has the same numerical value regardless of which observation is the starting point. This is not true for a percentage change. For illustrative purposes, in the following example, log changes are substantially different from percentage changes.

Suppose a series starts at 7, doubles to 14, then halves back to 7. The log change from 7 to 14 is 69%, and the log change from 14 to 7 is negative 69%. But the percentage change from 7 to 14 is 100%, while the percentage change from 14 to 7 is negative 50%. The log change reflects the fact that the second change reverses the first (and so has the same value) while the percentage change series appears to be very different in the first period compared with the second.

This approach is the same as that used by the Office for National Statistics (ONS) to compile multi-factor productivity.

7 . Strengths and limitations

This release reports estimates of unit labour costs (ULCs) and sectional unit labour costs (SULCs), for Quarter 1 (Jan to Mar) 2019. ULCs capture the full labour costs – including social security and employers' pension contributions – incurred in the production of a unit of economic output.

Labour costs make up around two-thirds of the overall cost of production of UK economic output. Changes in labour costs are therefore a large factor in overall changes in the cost of production. If increases in labour costs are not reflected in the volume of output, this can put upward pressure on the prices of goods and services, therefore this is a closely watched indicator of inflationary pressure in the economy.

Improvements to the way we publish ULCs and SULCs data

Although these estimates have been previously released in the quarterly labour productivity bulletin, this is the first stand-alone bulletin focusing on ULCs and SULCs.

This first edition forms part of our quarterly productivity bulletin, which also includes [quarterly labour productivity](#), an [overarching commentary](#), [quarterly estimates of public service productivity](#), [quarterly estimates of multi-factor productivity](#) and articles on productivity-related topics and data.

These statistics have been estimated using the latest data from the [labour productivity statistics](#) published on the same day.

The labour input measures used in this release are consistent with the latest [labour market statistics](#).

Unless otherwise stated all figures are seasonally adjusted.

We recently published an article detailing our plans to split the commentary we publish and associated datasets to help users more easily find the information relevant to them. This possibility was discussed at the [productivity user forum](#) on 13 March 2019 and user views were also invited in Labour productivity, UK: October to December 2018.

Details of where to find the ULC and SULC datasets can be found in Improving the presentation of the [labour productivity release: July 2019](#).

Quality of the data

The [Labour productivity Quality and Methodology Information report](#) contains important information on:

- the strengths and limitations of the data and how it compares with related data
- uses and users of the data
- how the output was created
- the quality of the output including accuracy of the data

Revisions

This release reflects revisions to the latest labour productivity release. Manufacturing unit wage costs and sectional unit labour costs also include revisions to the average weekly earnings as published in the [Labour market overview](#).

Revisions resulting from seasonal adjustment affect all periods, where seasonal adjustment is applied. Further information on revisions to ULCs can be found in the [Unit labour costs and unit wage costs: revisions triangles dataset](#).

8 . You may also be interested in

[Productivity economic commentary: January to March 2019](#)

Article | Released 5 July 2019

Draws together the main findings from official statistics and analysis of UK productivity to present a summary of recent developments.

[Labour productivity, UK: January to March 2019](#)

Article | Released 5 July 2019

The latest estimates of labour productivity for the whole economy.

[Industry by region estimates of labour productivity: 2017](#)

Article | Released 6 February 2019

Annual productivity estimates for 16 industries in Standard Industrial Classification 2007 section groups for each of the NUTS1 regions from 1997 to 2017. It compares annual productivity growth by region, as output per hour, relative to the UK and explains how manufacturing and services have grown across the regions.

[Regional and sub-regional productivity in the UK](#)

Article | Released 6 February 2019

Estimates for measures of labour productivity using a balanced gross value added (GVA) approach for NUTS1, NUTS2 and NUTS3 sub-regions of the UK, selected city regions and English local enterprise partnerships (LEPs) up to 2017. Estimates are in both real and nominal terms.

[Multi-factor productivity estimates: Experimental estimates January to March 2019](#)

Article | Released 5 July 2019

Presents quarterly estimates of multi-factor productivity (MFP), capital services and quality-adjusted labour input (QALI), including a range of industry breakdowns and analysis.

[A simple guide to multi-factor productivity](#)

Article | Released 5 October 2018

Explains the concept and measurement of multi-factor productivity through simple stylised examples.

[Quarterly UK public service productivity \(Experimental Statistics\): January to March 2019](#)

Article | Released 5 July 2019

Contains the latest experimental estimates for quarterly UK total public service productivity, inputs and output.

[Public service productivity: total, UK, 2016](#)

Article | Released 9 January 2019

Presents updated measures of output, inputs and productivity for public services in the UK between 1997 and 2015, in addition to new estimates for 2016.

[Public service productivity: healthcare, UK, 2016](#)

Article | Released 9 January 2019

Presents updated estimates of output, inputs and productivity for public service healthcare in the UK between 1995 and 2015, and new estimates for 2016.

[Public service productivity: healthcare, England: financial year ending 2017](#)

Article | Released 9 January 2019

Presents estimates of output, inputs and productivity for public service healthcare in England on a financial year basis up to financial year ending 2017.

[Improving estimates of labour productivity and international comparisons](#)

Article | Released 9 January 2019

Discusses recent Organisation for Economic Co-operation and Development findings showing that the methodologies, data sources and adjustments used to estimate the number of persons, jobs and hours worked varied significantly across countries, and explores these differences and the impact on our ICP.

[How productive is your business?](#)

Article | Released 6 July 2018

An interactive tool that aids businesses to calculate their productivity and compare their performance with other businesses in Great Britain.