

Statistical bulletin

Labour productivity, UK: October to December 2017

Output per hour, output per job and output per worker for the whole economy and a range of industries. Includes estimates of unit labour costs.



Contact:
Ciaren Taylor
productivity@ons.gsi.gov.uk
+44 (0)1633 455086

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1 . Main points

- UK labour productivity, as measured by output per hour, is estimated to have grown by 0.7% from Quarter 3 (July to Sept) 2017 to Quarter 4 (Oct to Dec) 2017; this is the second quarter in a row that output per hour grew, after falling in the first half of 2017.
- By contrast, output per worker and output per job both grew by 0.1% between the third and fourth quarter; the difference between these two measures and output per hour reflects a fall in average hours per job and per worker.
- In output per hour terms labour productivity grew in both services and manufacturing industries; services productivity grew by 0.3% on the previous quarter and manufacturing productivity grew by 2.6%.
- Earnings and other labour costs growth outpaced productivity growth, resulting in unit labour cost (ULC) growth of 2.1% in the year to Quarter 4 2017, up from the 1.4% growth in the year to Quarter 3 2017.

2 . Things you need to know about this release

This release reports labour productivity estimates for Quarter 4 (Oct to Dec) 2017 for the whole economy and a range of industries, together with estimates of unit labour costs. Productivity is important as it is considered to be a driver of long-run changes in average living standards.

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

Labour productivity is calculated by dividing output by labour input. 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 as a whole. Labour inputs in this release are measured in terms of workers, jobs (“productivity jobs”) and hours worked (“productivity hours”).

This release also reports estimates of unit labour costs (ULCs), which 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.

The equations for labour productivity and ULCs can be found in the Quality and methodology section of this release.

The output statistics in this release are consistent with the latest [Quarterly national accounts](#) published on 29 March 2018. Note that productivity in this release does not refer to [gross domestic product \(GDP\) per person](#), which is a measure that includes people who are not in employment.

The labour input measures used in this release are consistent with the latest [labour market statistics](#) as described further in the Quality and methodology section of this bulletin. Data in this release reflect revisions to GVA and income data incorporated in the latest [Quarterly national accounts](#).

Unless otherwise stated all figures are seasonally adjusted.

The next labour productivity bulletin (released 6 July 2018) will include some analysis of a number of methodological changes, previously consulted upon and agreed at user group meetings held last year and earlier this year. This will precede the adoption of these methods changes in the following release in October 2018. More information on these will be included alongside the next bulletin.

3 . Labour productivity up for second quarter in a row

Labour productivity on an output per hour basis – our headline measure – grew by 0.7% in Quarter 4 (Oct to Dec) 2017. This was the second quarterly increase in a row and left productivity 1.8% above its peak in Quarter 4 2007 prior to the economic downturn. Productivity for Quarter 4 2017 was 1.0% above the post-downturn peak that occurred in Quarter 4 2016. By contrast, output per worker and output per job both grew by 0.1% between the third and fourth quarter; the difference between these two measures and output per hour reflects a fall in average hours per job and per worker.

An increase of 0.7% is slightly higher than the average quarterly rate of productivity growth in the decade prior to the 2008 economic downturn, since when UK productivity growth has been subdued. This sustained stagnation, often referred to as the “productivity puzzle”, contrasts with patterns following previous UK economic downturns when productivity initially fell, but subsequently recovered to the previous trend rate of growth. There is wide and varied economic debate regarding the causes of this puzzle and further analysis of recent UK productivity trends can be found in the [January 2016](#), [May 2016](#) and [June 2016](#) Economic Reviews, as well as in several standalone articles including: [What is the productivity puzzle?](#), [The productivity conundrum, explanations and preliminary analysis](#) and [The productivity conundrum, interpreting the recent behaviour of the economy.](#)

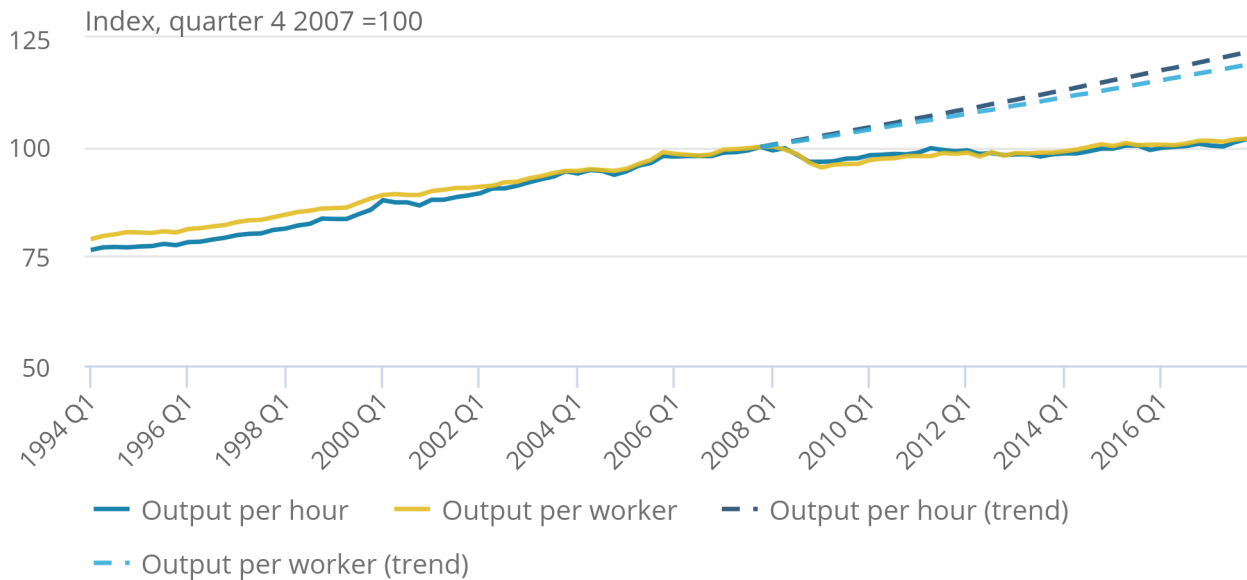
This puzzle is shown in Figure 1, which presents two alternative measures of productivity – output per hour and output per worker – alongside their projected 1994 to 2007 trends. Following years of steady growth, each measure peaked prior to and fell during the economic downturn. However, due to a [strong labour market performance accompanying a relatively weak recovery in output growth](#), productivity has not returned to its pre-downturn trend. Productivity in Quarter 4 2017, as measured by output per hour, was 16.4% below its pre-downturn trend – or, equivalently, productivity would have been 19.6% higher had it followed this pre-downturn trend¹.

Figure 1: Output per hour and output per worker

Seasonally adjusted, Quarter 1 (Jan to Mar) 1994 to Quarter 4 2017, UK

Figure 1: Output per hour and output per worker

Seasonally adjusted, Quarter 1 (Jan to Mar) 1994 to Quarter 4 2017, UK



Source: Office for National Statistics

Figure 2 breaks down the growth in productivity between Quarter 1 (Jan to Mar) 2008 and Quarter 4 2017 into contributions from different industry groupings and an “allocation effect” due to changes in the share of output and labour in each grouping. All else being equal, stronger (weaker) productivity growth in any given industry, or a movement of output and labour towards (away from) higher productivity industries will tend to increase (reduce) aggregate productivity growth.

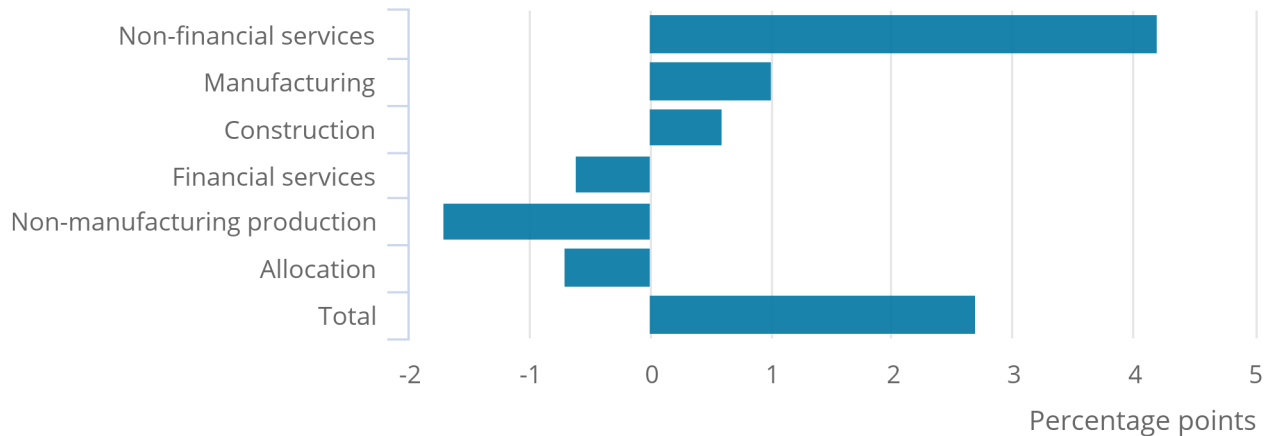
Non-financial services were the main positive contributor to productivity growth over this period, partly offset by negative contributions from non-manufacturing production and finance. The negative allocation effect – suggesting that output and labour have been moving away from higher to lower productivity industries in recent years – partly captures the falling share of output in mining and quarrying, which has among the highest levels of productivity of UK industry; partially a result of the falling reserves of oil and gas in the North Sea. Although negative for the period as a whole, the allocation effect was initially positive following the downturn, but [turned negative in recent years](#).

Figure 2: Contributions to growth of whole economy output per hour

Seasonally adjusted, cumulative quarterly changes, Quarter 1 (Jan to Mar) 2008 to Quarter 4 2017, UK

Figure 2: Contributions to growth of whole economy output per hour

Seasonally adjusted, cumulative quarterly changes, Quarter 1 (Jan to Mar) 2008 to Quarter 4 2017, UK



Source: Office for National Statistics

Notes:

1. Non-manufacturing production refers to: agriculture, forestry and fishing; mining and quarrying; electricity, gas, steam and air-conditioning supply; and water supply, sewerage, waste management and remediation activities.

Notes for: Labour productivity up for second quarter in a row

1. Differences between these two measures are due to differences in the denominator used in the calculation. Using the actual output per hour series as the denominator, rather than the trend series, results in a higher percentage gap. This is due to the actual series being lower than the trend series post-downturn.

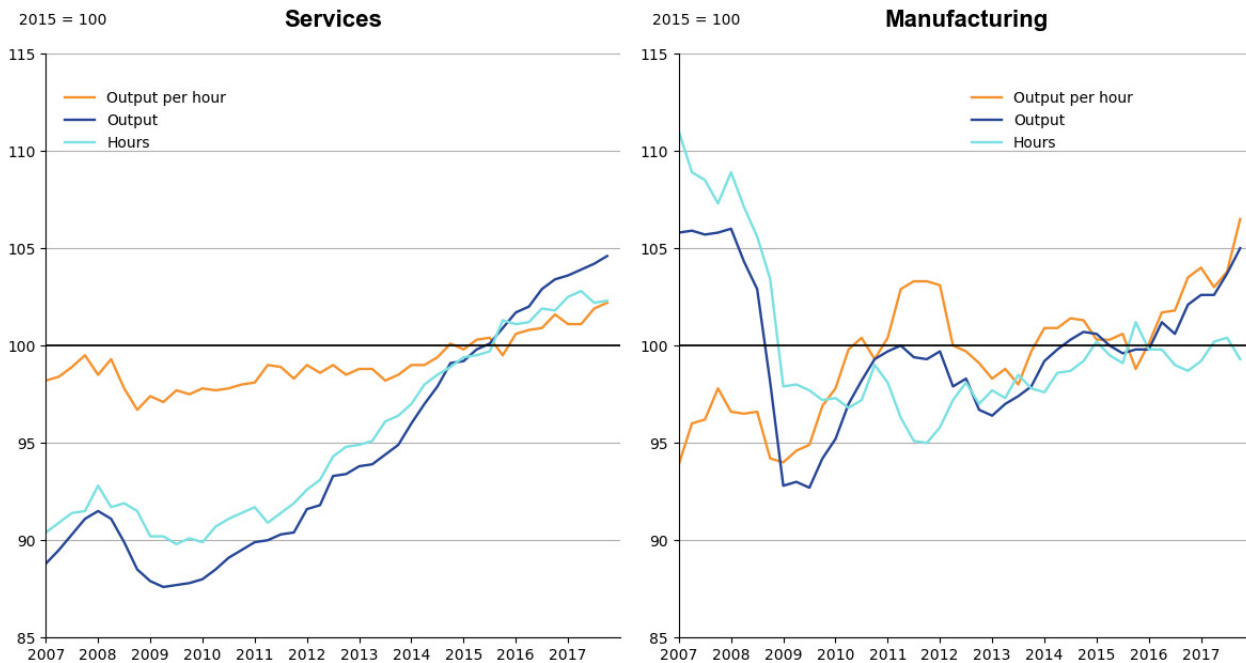
4 . Output per hour up in both services and manufacturing

Services output per hour grew by 0.3% in Quarter 4 (Oct to Dec) 2017, with output growing faster than hours worked over the period. In manufacturing, labour productivity grew by 2.6%, with output growth combining with a fall in hours worked over the quarter.

Figure 3 examines longer-term trends, showing output per hour and its components since Quarter 1 (Jan to Mar) 2008. Services are represented in the first panel, while manufacturing is represented in the second. Manufacturing output per hour has been more volatile than services in recent years. This reflects a degree of divergence in manufacturing between gross value added (GVA) and hours, most noticeable in 2009 and 2011 to 2012, whereas in services, GVA and hours follow fairly similar trends.

Figure 3: Components of services and manufacturing productivity measures

Seasonally adjusted, UK, Quarter 1 (Jan to Mar) 2007 to Quarter 4 2017



5 . Unit labour costs grow for the eleventh consecutive quarter

Unit labour costs (ULCs) reflect the full labour costs, including social security and employers' pension contributions, incurred in the production of a unit of economic output. Changes in labour costs are a large factor in overall changes in the cost of production. If increased costs are not reflected in increased output, for instance, this can put upward pressure on the prices of goods and services – sometimes referred to as “inflationary pressure”. ULCs grew by 2.1% in the year to Quarter 4 (Oct to Dec) 2017, reflecting a larger percentage increase in labour costs per hour than output per hour. This was the largest increase in ULCs since Quarter 1 (Jan to Mar) 2017.

Figure 4 shows changes in ULCs since Quarter 1 2008 on a quarter on same quarter a year earlier basis. The bars represent the contribution to changes in ULCs from changes in labour costs per hour and changes in output per hour. Holding other factors constant, increasing output per hour reduces ULCs – as total labour costs remain constant while output rises. As a result, output per hour has its sign reversed in Figure 4. In this presentation, positive (negative) output per hour growth has a negative (positive) effect on ULC growth.

While growth in ULCs has been broadly positive since the onset of the economic downturn, averaging around 1.6% since Quarter 1 2008, 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 6.0% by the end of the downturn in Quarter 2 (Apr to June) 2009 and remaining elevated until Quarter 1 2010. Figure 4 shows that the initial increase in ULC growth during the downturn was driven by falling output per hour, but from Quarter 2 2009 onwards, increasing labour costs per hour were the driving factor. Following the downturn, growth in ULCs began to slow, eventually becoming negative in Quarter 4 2010.

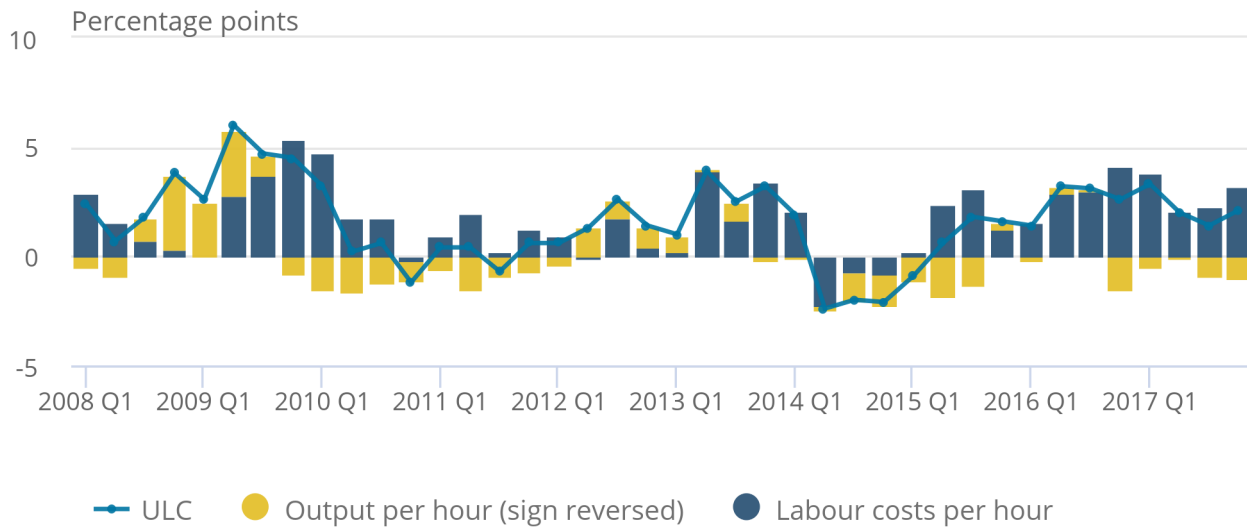
Following a period of low or negative growth, ULC growth has been around 2% for the past two years. This increase broadly reflects higher hourly labour cost growth, with relatively little offsetting output per hour growth.

Figure 4: Whole economy unit labour costs and their compositions, growth on quarter a year ago

Seasonally adjusted, UK, Quarter 1 (Jan to Mar) 2008 to Quarter 4 2017

Figure 4: Whole economy unit labour costs and their compositions, growth on quarter a year ago

Seasonally adjusted, UK, Quarter 1 (Jan to Mar) 2008 to Quarter 4 2017



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.

6 . Links to related statistics

- [UK productivity introduction: October to December 2017](#) draws together the headlines of the productivity releases into a single release, providing additional analysis of our productivity statistics (published 6 April 2018).
- [Labour productivity: October to December 2017](#) contains the latest estimates of labour productivity for the whole economy and a range of industries, together with estimates of unit labour costs (published 6 April 2018).
- [Quarterly UK public service productivity \(experimental statistics\): October to December 2017](#) contains the latest experimental estimates for quarterly UK total public service productivity, inputs and output (published 6 April 2018).

- [International comparisons of UK productivity \(ICP\), final estimates: to 2016](#) presents an international comparison of labour productivity across the G7 nations, in terms of growth in GDP per hour and GDP per worker (published 6 April 2017).
- [Industry by region estimates of Labour Productivity: April 2018](#) presents new, experimental industry-by-region productivity metrics; this includes measures of hours worked, jobs, and accompanying productivity measures for the SIC letter industries in the NUTS1 regions (published 6 April 2018).
- [Quarterly multi-factor productivity: Progress to date and next steps](#) details the methodology used to compile quarterly multi-factor productivity and sets out plans to reduce the time taken in producing these estimates and increasing the industry granularity (published 6 April 2018).
- [Quarterly Multi-factor productivity \(MFP\), \(experimental estimates\): to Q2 2017](#) decomposes output growth into the contributions that can be accounted for by labour and capital inputs; the contribution of labour is further decomposed into quantity (hours worked) and quality dimensions (published 6 April 2018).
- [Management practices and productivity in British production and services industries - initial results from the Management and Expectations Survey: 2016](#) Results from the second wave of a pilot survey, the Management and Expectations Survey, which gathered information on British management practices and firms' expectations for future growth (published 6 April 2018).
- [Public service productivity estimates: total public service, UK: 2015](#) presents updated measures of output, inputs and productivity for public services in the UK between 1997 and 2014, in addition to new estimates for 2015 (published 5 January 2018).
- [Public service productivity estimates: healthcare, 2015](#) presents updated estimates of output, inputs and productivity for public service healthcare in the UK between 1995 and 2014, in addition to new estimates for 2015 (published 5 January 2018).
- [International comparisons of labour productivity by industry: 2014](#) uses new production-side PPPs to present estimates of labour productivity for 29 European countries across 10 industries on a GVA per hour worked basis (published 6 October 2017).
- [Quality adjusted labour input: UK estimates to 2016](#) presents updated estimates of quality adjusted labour input (QALI) for the whole economy and for the market sector (published 6 October 2017).
- [Foreign direct investment and labour productivity: a micro-data perspective: 2012 to 2015](#) examines the composition of firms with foreign direct investment (FDI) in Great Britain between 2012 and 2015, and their productivity outcomes compared with firms with no FDI relationships (published 6 October 2017).
- [Introducing division level labour productivity estimates](#) provides an overview of new and experimental estimates of labour productivity at the two-digit SIC industry level for the UK and provides some initial analysis demonstrating trends in the data (published 5 July 2017).
- [Understanding firms in the bottom 10% of the labour productivity distribution in Great Britain: "the laggards", 2003 to 2015](#) examines the characteristics of businesses in the bottom 10% of the labour productivity distribution in terms of their size, age, industry and location, between 2003 and 2015 (published 5 July 2017).
- [Multi-factor productivity estimates: Experimental estimates to 2015](#) decomposes output growth into the contributions that can be accounted for by labour and capital inputs; the contribution of labour is further decomposed into quantity (hours worked) and quality dimensions (published 5 April 2017).
- [Developing new measures of infrastructure investment: July 2017](#) is the first in a series of papers on infrastructure statistics, focusing on definitional and data challenges in measuring infrastructure investment (published 5 July 2017).
- [Volume index of UK capital services \(experimental\): estimates to Quarter 2 \(Apr to Jun\) 2017](#) provides estimates of the contribution of capital inputs to production in the market sector, split by asset and industry (published 7 February 2018).

7 . What’s changed in this release?

This release reflects revisions to gross value added and income data resulting from quarterly national accounts, affecting quarters in 2017. Very small revisions to jobs and hours data since 2011 reflect improved estimates of the distribution of jobs across industries, concentrated in agriculture. Revisions resulting from seasonal adjustment affect all periods, where seasonal adjustment is applied.

Methodological changes which had previously been scheduled for introduction in the current release have been postponed until later in the year, to allow more time for quality assurance.

8 . Quality and methodology

The measure of output used in these statistics is the chained volume (real) measure of gross value added (GVA) at basic prices, with the exception of the regional analysis in Table 9, where the output measure is nominal GVA (NGVA), using the income approach. These measures differ because NGVA is not adjusted to account for price changes; this means that if prices were to rise more quickly in one region than the others, then the measures of productivity for that region could show relative growth in productivity compared with other regions purely as a result of the price changes.

Labour input measures used in this bulletin are known as “productivity jobs” and “productivity hours”. Productivity jobs differ from the workforce jobs (WFJ) estimates, published in Table 6 of our [Labour market statistical bulletin](#), in three ways:

- to achieve consistency with the measurement of GVA, the employee component of productivity jobs is derived on a reporting unit (RU) basis, whereas the employee component of the WFJ estimates is on a local unit (LU) basis
- productivity jobs are scaled so industries sum to total Labour Force Survey (LFS) jobs – note that this constraint is applied in non-seasonally adjusted terms; the nature of the seasonal adjustment process means that the sum of seasonally adjusted productivity jobs and hours by industry can differ slightly from the seasonally adjusted LFS totals
- productivity jobs are calendar quarter average estimates, whereas WFJ estimates are provided for the last month of each quarter

Productivity hours are derived by multiplying employee and self-employed jobs at an industry level (before seasonal adjustment) by average actual hours worked from the LFS at an industry level. Results are scaled so industries sum to total unadjusted LFS hours and then seasonally adjusted. Labour productivity is then derived using growth rates for GVA and labour inputs in line with the following equation:

$$\Delta \text{Labour productivity} = \Delta \left(\frac{\text{Output in Gross Value Added (GVA) terms}}{\text{Labour Input (hours, workers or jobs)}} \right) \approx \Delta \text{GVA} - \Delta \text{Labour Input}$$

Industry estimates of average hours derived in this process differ from published estimates (found in Table HOUR03 in the [Labour market statistics](#) release), as the HOUR03 estimates are calculated by allocating all hours worked to the industry of main employment, whereas the productivity hours system takes account of hours worked in first and second jobs by industry.

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 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:

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

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.

A research note, [Sources of revisions to labour productivity estimates](#), is available, and further commentary on the nature and sources of the revisions introduced in this quarter is available in the [UK productivity bulletin – introduction](#).

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

1 Labour productivity key measures

United Kingdom

Seasonally adjusted (2015=100)

Section	Whole economy			Production		Manufacturing		Services	
	Output per worker	Output per job	Output per hour	Output per job	Output per hour	Output per job	Output per hour	Output per job	Output per hour
	A-U	A-U	A-U	B-E	B-E	C	C	G-U	G-U
Indices	A4YM	LNNN	LZVB	DJ4M	DJK3	DJ4P	DJK6	DJE3	DJP9
2014	99.2	99.1	99.1	100.0	99.9	101.0	101.1	99.2	99.4
2015	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2016	100.3	100.5	100.3	101.5	102.3	101.0	101.8	101.2	101.0
2017	101.0	101.3	101.0	102.6	104.0	102.5	104.3	102.0	101.6
2014 Q1	98.5	98.4	98.6	100.3 [†]	99.7 [†]	101.2 [†]	100.9	98.5	99.0
Q2	98.9	98.8	98.7	100.2	99.8	101.2	100.9	98.7	99.0
Q3	99.5	99.4	99.2	99.7	100.1	100.7	101.4	99.3	99.4
Q4	100.1	100.0	99.7	99.8	99.9	100.8	101.3	100.2	100.1
2015 Q1	99.7	99.6	99.7	99.2	99.5	99.9	100.3	99.6	99.8 [†]
Q2	100.4	100.3	100.4	100.2	100.2	100.1	100.3 [†]	100.1	100.3
Q3	99.9	100.0	100.4	100.1	101.2	99.8	100.6	100.0	100.4
Q4	100.0	100.1	99.4	100.5	99.1	100.2	98.8	100.3	99.5
2016 Q1	100.0	100.2	100.0	100.3	100.3	100.4	100.1	101.0	100.6
Q2	99.9	100.1	100.1	101.7	102.6	100.8	101.7	100.8	100.8
Q3	100.3	100.5	100.3	101.5	102.8	100.5	101.8	101.3	100.9
Q4	100.9	101.2	100.9	102.5	103.4	102.4	103.5	101.9	101.6
2017 Q1	100.8	101.1	100.4	103.2	103.9	103.1	104.0	101.9 [†]	101.1
Q2	100.7	101.0	100.2 [†]	102.3	102.9	102.0	103.0	101.8	101.1
Q3	101.2	101.5 [†]	101.2	102.4	103.9	101.9	103.8	102.1	101.9
Q4	101.3	101.6	101.9	102.7	105.5	103.1	106.5	102.2	102.2
Per cent change on quarter a year ago	A4YN	LNNP	LZVD	DJ4O	DJK5	DJ4R	DJK8	DJE5	DJQ3
2014 Q1	0.4	0.2	0.1	2.1	2.1	2.7	2.6	-0.2	0.1
Q2	0.9	0.7	0.2	0.8	1.1	1.9	2.1	0.5	0.2
Q3	1.3	1.3	1.3	0.8 [†]	2.3	2.1	3.5	1.2	1.2
Q4	2.0	2.0	1.4	0.7	0.3	1.7	1.5 [†]	2.2	1.7 [†]
2015 Q1	1.3	1.2	1.1	-1.1	-0.2 [†]	-1.2	-0.6	1.1	0.8
Q2	1.5	1.6	1.8	-	0.4	-1.1	-0.6	1.4	1.3
Q3	0.5	0.6	1.3	0.5	1.1	-0.9	-0.7	0.7	1.1
Q4	-0.2	0.1	-0.3	0.7	-0.7	-0.6	-2.4	0.1	-0.6
2016 Q1	0.3	0.7	0.2	1.2	0.8	0.5	-0.2	1.4	0.9
Q2	-0.5	-0.2	-0.3	1.5	2.4	0.7	1.4	0.6 [†]	0.6
Q3	0.4	0.5	-0.1	1.4	1.7	0.8	1.1	1.3	0.5
Q4	0.9	1.0	1.5	2.0	4.3	2.2	4.8	1.6	2.1
2017 Q1	0.8	0.9	0.5	2.8	3.6	2.6 [†]	3.9	0.9	0.4
Q2	0.8	0.9	0.1	0.6	0.2	1.3	1.3	1.0	0.2
Q3	0.9	1.0	0.9 [†]	0.9	1.0	1.4	1.9	0.9	1.0
Q4	0.4	0.4	1.0	0.2	2.0	0.7	2.8	0.3	0.6
Per cent change on previous quarter	A4YO	DMWR	TXBB	DJ4N	DJK4	DJ4Q	DJK7	DJE4	DJQ2
2014 Q1	0.3	0.3	0.2	1.1	0.2	2.0	1.1	0.4	0.5
Q2	0.5	0.4	0.1	-0.1 [†]	0.1	-	0.1 [†]	0.2	-
Q3	0.6	0.6	0.5	-0.6	0.2 [†]	-0.6	0.4	0.6	0.4 [†]
Q4	0.7	0.7	0.6	0.2	-0.2	0.2	-0.1	0.9	0.8 [†]
2015 Q1	-0.4	-0.5	-	-0.7	-0.4	-0.9	-1.0	-0.6	-0.3
Q2	0.7	0.8	0.7	1.0	0.7	0.2	0.1	0.5	0.5
Q3	-0.5	-0.3	-	-0.1	1.0	-0.3	0.3	-0.1	0.1
Q4	-	0.1	-1.0	0.4	-2.0	0.4	-1.8	0.3	-0.9
2016 Q1	-	0.1	0.5	-0.2	1.1	0.2	1.3	0.7	1.1
Q2	-0.1	-0.1	0.2	1.3	2.4	0.3	1.6	-0.2	0.2
Q3	0.4	0.3	0.2	-0.2	0.2	-0.2	0.1	0.5	0.1
Q4	0.6	0.7	0.5	0.9	0.6	1.9	1.7	0.6 [†]	0.7
2017 Q1	-0.1	-	-0.4 [†]	0.7	0.4	0.6	0.4	-	-0.5
Q2	-0.1	-0.1	-0.2	-0.9	-0.9	-1.0	-0.9	-0.1	-
Q3	0.5 [†]	0.5 [†]	1.0	0.1	1.0	-0.1	0.7	0.4	0.8
Q4	0.1	0.1	0.7	0.2	1.6	1.2	2.6	-	0.3

[†]Indicates that estimates are new or have been revised. The period marked is the earliest in the table to have been revised

2 Unit labour costs and unit wage costs

United Kingdom

Seasonally adjusted (2015=100)

Section	Whole economy		Manufacturing
	Unit labour costs	Unit wage costs	Unit wage costs
	A-U	A-U	C
Indices			
	LNNL	LNNK	DIX4
2014	99.2	98.6	97.5
2015	100.0	100.0	100.0
2016	102.6	102.3	101.4
2017	104.8	104.0	101.8
2014 Q1	100.2	99.1	97.2 [†]
Q2	99.0	98.7	97.0
Q3	98.7	97.8	97.7
Q4	99.0	98.7	98.1
2015 Q1	99.3	99.1	99.1
Q2	99.6	99.5	99.5
Q3	100.5	100.7	100.5
Q4	100.6	100.7	100.8
2016 Q1	100.7	101.0	101.0
Q2	102.8	102.4	101.9
Q3	103.6	102.9	102.3
Q4	103.3	102.6	100.4
2017 Q1	104.0 [†]	102.9	100.1
Q2	104.8	103.8 [†]	101.8
Q3	105.1	104.3	102.8
Q4	105.5	105.1	102.6
Per cent change on quarter a year ago			
	DMWN	LOJE	DJ4J
2014 Q1	1.9	3.0	0.4
Q2	-2.4	-1.1	-0.7 [†]
Q3	-2.0	-1.5	-0.3
Q4	-2.1	-1.0	-0.3
2015 Q1	-0.9	-	2.0
Q2	0.6	0.8	2.6
Q3	1.8	3.0	2.9
Q4	1.6	2.0	2.8
2016 Q1	1.4	1.9	1.8
Q2	3.2	3.0	2.3
Q3	3.1	2.2	1.7
Q4	2.6	2.0	-0.4
2017 Q1	3.3 [†]	1.9	-0.9
Q2	2.0	1.4 [†]	-0.1
Q3	1.4	1.3	0.5
Q4	2.1	2.4	2.2
Per cent change on previous quarter			
	DMWO	DMWL	DJ4I
2014 Q1	-0.9	-0.6	-1.1
Q2	-1.2	-0.4	-0.2 [†]
Q3	-0.4	-1.0	0.7
Q4	0.4	0.9	0.4
2015 Q1	0.3	0.5	1.1
Q2	0.3	0.3	0.4
Q3	0.9	1.2	1.0
Q4	0.1	-	0.3
2016 Q1	0.1	0.3	0.1
Q2	2.1	1.4	0.9
Q3	0.8	0.5	0.4
Q4	-0.3	-0.3	-1.8
2017 Q1	0.7 [†]	0.2 [†]	-0.3
Q2	0.8	0.9	1.7
Q3	0.3	0.5	1.0
Q4	0.4	0.8	-0.2

[†] indicates that estimates are new or have been revised. The period marked is the earliest in the table to have been revised.

3 Output per job: Manufacturing subsections

United Kingdom

Seasonally adjusted (2015=100)

	Food, beverages & tobacco	Textiles, wearing apparel & leather	Wood & paper products, & printing	Chemicals, Pharmaceuticals	Rubber, plastics & non-metallic minerals	Basic metals & metal products	Computer etc products, Electrical equipment	Machinery & equipment	Transport equipment	Coke & refined petroleum, Other manufacturing
Divisions	10-12	13-15	16-18	20-21	22-23	24-25	26-27	28	29-30	19,31-33
Level (£k)										
2013	63.0	50.0	47.4	146.2	51.7	51.2	60.8	56.6	76.1	54.7
Indices										
	DJ54	DJ57	DJ5F	DJ5I	DJ5L	DJB2	DJB7	DJC2	DJC5	DJD3
2014	102.7	92.5	99.8	95.1	102.6	102.4	97.3	115.9	99.4	102.7
2015	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2016	99.0	95.4 [†]	99.8	102.9	105.2	101.5	105.4	103.7	97.5	101.5
2017	99.2	97.1	100.5	97.1	107.9	101.2	111.0	114.2	100.9	102.5
2014 Q1	103.7	94.5	100.7 [†]	93.8	104.4	103.5	95.1	112.8	99.4	103.3 [†]
Q2	103.1	97.3	99.3	92.7	103.9	101.9	97.6	117.6	100.3	101.6
Q3	102.2	88.3	99.4	95.8	102.1	102.3	98.0	117.7 [†]	98.1	102.5
Q4	101.7 [†]	89.9	99.8	98.2	99.9	102.0	98.3	115.6	100.0	103.5
2015 Q1	100.5	96.6	100.7	99.5	99.6	101.9	96.5	103.1	100.0	99.8
Q2	99.1	101.5	98.9	99.6	97.5	101.7	101.4	99.3	102.0 [†]	100.7
Q3	100.3	103.4	99.8	100.0	100.8	96.9	101.0	98.7	99.2	99.7
Q4	100.0	98.5	100.6	100.8 [†]	102.2	99.5	101.1	98.9	98.8	99.7
2016 Q1	99.2	103.4	98.7	100.3	104.6	102.8	102.1	99.0	97.0	100.4
Q2	99.4	93.6	100.4	104.8	105.5	100.4	105.6	100.8	98.8	98.6
Q3	98.9	92.7	99.8	101.1	103.1	101.1	103.9	105.6	96.0	103.6
Q4	98.3	92.1	100.3	105.4	107.7	101.7	109.9	109.3	98.0	103.4
2017 Q1	99.1	96.1 [†]	103.8	95.4	108.4 [†]	100.3 [†]	111.6 [†]	114.1	100.8	106.5
Q2	98.4	97.7	100.5	98.1	107.9	100.1	110.9	112.3	98.9	102.9
Q3	99.5	98.2	100.4	96.2	107.9	100.0	110.8	113.3	101.8	98.5
Q4	99.8	96.3	97.4	98.5	107.4	104.5	110.6	117.2	102.2	102.0
Per cent change on quarter a year ago										
	DJ56	DJ5E	DJ5H	DJ5K	DJ5N	DJB6	DJB9	DJC4	DJD2	DJD7
2014 Q1	3.6	-8.3	1.7	6.5	5.3	3.2	-4.3 [†]	10.1	0.1 [†]	8.0 [†]
Q2	2.0	0.1	-3.0	-3.3	8.5	2.1	-1.5	15.6	2.1	3.9
Q3	3.5	-7.3	-3.7 [†]	6.5	5.8	1.7	4.1	12.2	-1.1	1.5
Q4	2.2	-2.1	-1.8	6.9	0.4	-1.1	5.4	7.6	2.0	2.7
2015 Q1	-3.0	2.2	-	6.2	-4.6	-1.6	1.4	-8.6	0.7	-3.4
Q2	-3.9	4.4	-0.4	7.5	-6.2	-0.1	4.0	-15.6	1.7	-0.8
Q3	-1.9	17.1	0.5	4.4 [†]	-1.2	-5.3	3.0	-16.2 [†]	1.1	-2.7
Q4	-1.7 [†]	9.6	0.8	2.7	2.2	-2.5	2.9	-14.4	-1.2	-3.6
2016 Q1	-1.3	7.1	-2.0	0.7	5.1	0.8 [†]	5.8	-4.0	-3.0	0.6
Q2	0.3	-7.8 [†]	1.5	5.2	8.3	-1.4	4.0	1.6	-3.1	-2.2
Q3	-1.4	-10.4	-0.1	1.1	2.3	4.4	2.9	7.0	-3.2	3.9
Q4	-1.7	-6.6	-0.3	4.6	5.4	2.2	8.6	10.5	-0.8	3.7
2017 Q1	-0.1	-7.0	5.3	-4.9	3.6 [†]	-2.4	9.3	15.3	3.9	6.1
Q2	-1.0	4.3	-	-6.4	2.2	-0.2	5.1	11.4	0.1	4.5
Q3	0.6	6.0	0.7	-4.8	4.7	-1.1	6.6	7.3	6.0	-4.9
Q4	1.5	4.6	-2.9	-6.6	-0.2	2.8	0.7	7.2	4.3	-1.4
Per cent change on previous quarter										
	DJ55	DJ58	DJ5G	DJ5J	DJ5M	DJB3	DJB8	DJC3	DJC6	DJD4
2014 Q1	4.1	2.9	-0.9	2.0	4.9	0.4	2.0	5.0	1.3	2.5 [†]
Q2	-0.6	2.9	-1.3 [†]	-1.2	-0.5	-1.6	2.6	4.2	0.9	-1.7
Q3	-0.8	-9.2	0.1	3.4	-1.8 [†]	0.4	0.4	0.1 [†]	-2.2	0.9
Q4	-0.5 [†]	1.8	0.4	2.5	-2.1	-0.3	0.3	-1.8	1.9	1.0
2015 Q1	-1.2	7.4	0.9	1.4	-0.3	-0.1	-1.9	-10.8	-	-3.6
Q2	-1.4	5.1	-1.7	0.1	-2.1	-0.1	5.1	-3.7	1.9	1.0
Q3	1.3	1.8 [†]	0.9	0.4	3.4	-4.8	-0.5	-0.6	-2.7	-1.0
Q4	-0.3	-4.7	0.8	0.8 [†]	1.3	2.7	0.2	0.2	-0.4	-
2016 Q1	-0.8	4.9	-1.9	-0.6	2.4	3.3	1.0	0.1	-1.8 [†]	0.6
Q2	0.2	-9.5	1.8	4.5	0.9	-2.3	3.4	1.9	1.9	-1.8
Q3	-0.5	-1.0	-0.7	-3.6	-2.3	0.8	-1.5	4.7	-2.9	5.1
Q4	-0.6	-0.7	0.5	4.3	4.5	0.5	5.7	3.5	2.1	-0.2
2017 Q1	0.8	4.4	3.6	-9.5	0.6	-1.4 [†]	1.6 [†]	4.4	2.8	2.9
Q2	-0.8	1.6	-3.3	2.9	-0.5	-0.1	-0.6	-1.6	-1.8	-3.3
Q3	1.2	0.5	-	-1.9	0.1	-0.1	-0.1	0.9	2.9	-4.3
Q4	0.3	-2.0	-3.0	2.4	-0.4	4.5	-0.1	3.5	0.4	3.5

[†] indicates that estimates are new or have been revised. The period marked is the earliest in the table to have been revised.

4 Output per hour worked: Manufacturing subsections

United Kingdom

Seasonally adjusted (2015=100)

	Food, beverages & tobacco	Textiles, wearing apparel & leather	Wood & paper products, & printing	Chemicals, Pharmaceuticals	Rubber, plastics & non-metallic minerals	Basic metals & metal products	Computer etc products, Electrical equipment	Machinery & equipment	Transport equipment	Coke & refined petroleum, Other manufacturing
Divisions	10-12	13-15	16-18	20-21	22-23	24-25	26-27	28	29-30	19,31-33
Level (£)										
2013	34.2	30.1	25.4	80.0	26.9	26.3	32.6	29.9	40.7	29.0
Indices										
	DJK9	DJL4	DJL7	DJM4	DJM7	DJN4	DJN7	DJO5	DJO8	DJP3
2014	104.0	94.9	100.5	94.4	105.2	101.5	98.1	113.3	99.9 [†]	100.0
2015	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2016	100.0	95.1 [†]	102.7	102.0	111.0	103.5	103.0	103.9	99.6	97.0 [†]
2017	102.8	95.2	102.4	97.1	110.0	105.7	112.7	116.5	102.6	100.3
2014 Q1	102.5 [†]	101.7	99.9	94.2	104.4	102.1	93.8	111.8	101.4 [†]	100.8 [†]
Q2	103.3	101.6	100.4 [†]	93.2	107.3 [†]	99.5	97.9 [†]	114.8 [†]	98.6	98.8
Q3	104.7	90.1 [†]	100.9	93.7	109.0	101.0	99.7	113.1	99.7	99.7
Q4	105.3	86.0	100.8	96.7	100.0	103.3	101.2	113.7	100.2	100.6
2015 Q1	102.0	93.2	104.5	99.7 [†]	98.0	100.4	97.8	103.5	99.9	100.6
Q2	100.8	98.0	100.0	101.3	97.2	103.2 [†]	98.9	99.6	100.3	101.4
Q3	99.2	106.0	99.2	100.3	101.5	99.4	102.2	100.4	100.6	100.8
Q4	98.1	102.7	96.4	98.6	103.3	97.0	101.1	96.5	99.1	97.2
2016 Q1	99.0	99.9	96.5	101.5	108.1	102.3	100.5	101.1	98.3	96.4
Q2	97.2	94.8	103.4	104.5	112.0	104.0	103.0	99.3	102.9	96.4
Q3	102.5	93.2	107.0	98.7	108.3	104.0	102.0	103.6	97.8	97.5
Q4	101.2	92.4	103.8	103.3	115.8	103.6	106.4	111.7	99.3	97.9
2017 Q1	101.5	93.6	103.8	93.5	113.5	104.9	109.2	114.9	101.0	103.1
Q2	102.5	96.5	102.0	95.3	110.4	101.6	112.1	114.1	98.9	100.3
Q3	104.2	95.5	101.3	99.7	108.5	104.4	112.2	115.9	103.4	96.5
Q4	102.8	95.4	102.3	100.0	107.7	111.9	117.1	121.3	106.9	101.2
Per cent change on quarter a year ago										
	DJL3	DJL6	DJM3	DJM6	DJM9	DJN6	DJN9	DJO7	DJP2	DJP5
2014 Q1	2.1 [†]	-0.5	-1.8 [†]	8.7	7.2	1.4	-4.6 [†]	11.2	1.8	6.7
Q2	1.9	2.5	-2.8	1.2	10.3	1.6	3.1	13.7	-1.6	2.8 [†]
Q3	5.1	-9.8 [†]	0.6	4.5 [†]	10.3	5.1	11.2	7.1	-2.4 [†]	0.8
Q4	6.7	-13.6	0.2	4.7	-	1.2	6.0	5.6 [†]	-0.7	0.3
2015 Q1	-0.5	-8.4	4.6	5.9	-6.1	-1.7	4.4	-7.4	-1.4	-0.2
Q2	-2.5	-3.6	-0.4	8.7	-9.4	3.7	1.0	-13.3	1.7	2.7
Q3	-5.3	17.7	-1.7	7.1	-6.9	-1.5	2.6	-11.2	1.0	1.2
Q4	-6.8	19.5	-4.4	2.0	3.2	-6.0	-0.2	-15.2	-1.0	-3.4
2016 Q1	-2.9	7.1	-7.6	1.7	10.3	1.9	2.8	-2.4	-1.6	-4.1
Q2	-3.5	-3.3	3.5	3.2	15.2	0.8	4.1	-0.3	2.5	-5.0
Q3	3.3	-12.1	7.9	-1.6	6.7 [†]	4.5 [†]	-0.3	3.1	-2.8	-3.3
Q4	3.1	-10.1	7.7	4.7	12.1	6.8	5.3	15.8	0.2	0.7
2017 Q1	2.5	-6.3	7.6	-7.9	5.0	2.5	8.6	13.7	2.7	6.9
Q2	5.4	1.8	-1.4	-8.9	-1.4	-2.3	8.9	14.8	-3.8	4.0
Q3	1.7	2.5	-5.3	1.1	0.2	0.4	10.0	11.9	5.7	-1.0
Q4	1.7	3.2	-1.5	-3.2	-7.0	8.0	10.0	8.7	7.6	3.4
Per cent change on previous quarter										
	DJL2	DJL5	DJM2	DJM5	DJM8	DJN5	DJN8	DJO6	DJO9	DJP4
2014 Q1	3.9 [†]	2.2 [†]	-0.7 [†]	1.9 [†]	4.4	0.1 [†]	-1.9	3.8	0.5 [†]	0.5
Q2	0.8	-0.1	0.5	-1.1	2.7	-2.6	4.4 [†]	2.7	-2.7	-2.0 [†]
Q3	1.3	-11.4	0.5	0.5	1.7 [†]	1.5	1.8	-1.5 [†]	1.1	0.9
Q4	0.6	-4.5	-0.1	3.2	-8.3	2.2	1.6	0.6	0.5	0.9
2015 Q1	-3.1	8.4	3.6	3.2	-2.0	-2.8	-3.4	-8.9	-0.2	-
Q2	-1.2	5.1	-4.3	1.6	-0.8	2.8	1.0	-3.8	0.4	0.8
Q3	-1.6	8.2	-0.8	-1.0	4.4	-3.6	3.4	0.9	0.3	-0.6
Q4	-1.1	-3.1	-2.8	-1.7	1.8	-2.4	-1.1	-4.0	-1.5	-3.6
2016 Q1	1.0	-2.8	0.2	2.9	4.7	5.5	-0.5	4.8	-0.8	-0.7
Q2	-1.8	-5.1	7.2	3.0	3.6	1.6	2.4	-1.7	4.6	-0.1
Q3	5.4	-1.7	3.5	-5.6	-3.3	-	-1.0	4.3	-4.9	1.1
Q4	-1.3	-0.8	-3.0	4.7	6.9	-0.4	4.4	7.8	1.5	0.4
2017 Q1	0.3	1.3	-	-9.5	-2.0	1.3	2.7	2.9	1.7	5.4
Q2	1.0	3.1	-1.8	1.9	-2.7	-3.1	2.6	-0.8	-2.1	-2.8
Q3	1.7	-1.0	-0.6	4.7	-1.8	2.7	0.1	1.6	4.6	-3.7
Q4	-1.3	-0.1	1.0	0.3	-0.7	7.2	4.3	4.7	3.3	4.9

[†] indicates that estimates are new or have been revised. The period marked is the earliest in the table to have been revised.

5 Output per job: Services sections

United Kingdom

Seasonally adjusted (2015=100)

	Wholesale & retail trade, motor vehicle repair	Transport & storage	Accommodation & food services	Information & communication	Finance & insurance	Real estate activities	Professional, scientific & technical activities	Admin & support services	Government services	Arts, entertainment & recreation	Other services
Section	G	H	I	J	K	L	M	N	O-Q	R	S-U
Level (£k)											
2013	34.5	48.7	22.2	77.1	107.8	375.2	48.2	28.5	35.3	26.4	44.9
Indices											
2014	DJE6	DJE9	DJF4	DJF7	DJG5	DJH4	DJH7	DJI2	DJI5	DJJ3	DJJ6
2015	97.2	102.7	97.9	96.7	102.2	100.7	98.5	97.5	99.8	103.0	96.0
2016	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2017	105.4	94.4	100.5	106.9	100.0	101.2	101.2	101.6	100.4	98.1	100.8
2017	108.1	93.6	100.1	109.2	100.6	99.7	103.7	102.7	101.5	96.9	93.1
2014 Q1	95.8	100.7	96.8	96.6	102.5	99.4	96.6 [†]	97.4 [†]	99.3	104.2	94.7 [†]
Q2	96.8	101.1	97.8	96.4	102.6	101.2	97.3	97.1	99.3	104.4	93.5
Q3	97.3	104.1	98.3 [†]	96.1	100.8	101.8	98.8	97.5	100.1	102.0	96.9
Q4	98.8	104.8	98.8	97.7 [†]	102.7	100.3	101.3	98.1	100.7	101.4	98.8
2015 Q1	98.8	103.1	99.7	98.0	101.9	98.9	99.2	99.0	99.5	100.1	98.3
Q2	100.0	100.9	100.0	99.8	99.9	98.7	100.7	100.0	100.2	99.9	98.4
Q3	100.1 [†]	98.9	99.6	100.7	98.7	100.8	99.8	101.1	100.2	98.8	98.7
Q4	101.1	97.1	100.7	101.5	99.5	101.6	100.3	100.0	100.1	101.3	104.6
2016 Q1	103.8	96.0	99.8	104.9	99.4	100.3	100.5	100.6	100.5	100.9	102.9
Q2	104.4	94.7	100.4	104.2	100.6	100.0	101.1	100.4	100.1	97.3 [†]	102.6
Q3	105.5	93.3	100.8	108.1	99.7 [†]	101.5	101.4	102.6	100.3	97.6	99.0
Q4	108.0	93.6	101.1	110.4	100.2	102.9	101.9	102.7	100.7	96.4	98.7
2017 Q1	107.0	94.7 [†]	100.5	107.7	101.5	98.1 [†]	102.7	103.4	101.5 [†]	97.3	96.5
Q2	107.5	93.0	99.5	108.8	100.8	101.2	103.4	102.4	101.0	99.2	94.3
Q3	109.2	92.5	99.9	109.7	100.8	100.0	103.9	102.2	101.8	94.8	91.8
Q4	108.9	94.1	100.3	110.5	99.4	99.4	104.8	102.6	101.6	96.2	89.7
Per cent change on quarter a year ago											
	DJE8	DJF3	DJF6	DJF9	DJG8	DJH6	DJH9	DJI4	DJI7	DJJ5	DJJ8
2014 Q1	4.9	1.8	-6.1	-5.4	-0.8	-3.8	-1.6	6.3 [†]	-0.3	-1.3	-2.3
Q2	4.4	2.6	-3.0	-4.8	-1.2	1.7	-0.3	3.3	0.9	-0.8	-0.3
Q3	3.6	7.7 [†]	-0.6	-4.5	-2.8	3.5 [†]	0.6	2.5	1.8	-2.1 [†]	5.5 [†]
Q4	4.8	6.6	2.3	-1.4	0.5	1.9	4.5	1.2	1.7	-3.8	8.6
2015 Q1	3.1	2.4	3.0	1.5	-0.6	-0.5	2.7	1.7	0.3	-4.0	3.9
Q2	3.3	-0.3	2.3	3.5	-2.6	-2.4	3.5	2.9	0.9	-4.3	5.1
Q3	3.0	-4.9	1.4 [†]	4.8	-2.1	-0.9	0.9	3.7	0.1	-3.2	1.8
Q4	2.3	-7.4	1.9	3.8	-3.1 [†]	1.2	-1.0	1.9	-0.6	-0.1	5.8
2016 Q1	5.1	-6.9	0.2	7.0	-2.5	1.5	1.3	1.6	1.0	0.8	4.6
Q2	4.4	-6.1	0.4	4.5 [†]	0.7	1.3	0.4	0.4	-0.1	-2.5	4.3
Q3	5.3	-5.6	1.2	7.3	1.0	0.7	1.7	1.5	0.1	-1.2	0.3
Q4	6.9	-3.6	0.4	8.8	0.7	1.3	1.6	2.7	0.6	-4.9	-5.7
2017 Q1	3.1	-1.4	0.7	2.7	2.1	-2.2	2.2 [†]	2.8	0.9	-3.6	-6.2
Q2	2.9 [†]	-1.8	-0.9	4.3	0.2	1.2	2.3	2.0	0.8	1.9	-8.1
Q3	3.5	-0.9	-0.8	1.5	1.1	-1.5	2.4	-0.3	1.4 [†]	-2.9	-7.3
Q4	0.8	0.6	-0.8	0.1	-0.8	-3.4	2.8	-0.1	0.9	-0.2	-9.1
Per cent change on previous quarter											
	DJE7	DJF2	DJF5	DJF8	DJG6	DJH5	DJH8	DJI3	DJI6	DJJ4	DJJ7
2014 Q1	1.6	2.5	0.2	-2.6	0.3	0.9	-0.3	0.5 [†]	0.3	-1.1	4.0
Q2	1.0	0.4	1.0	-0.2	0.1	1.8	0.7 [†]	-0.3	-	0.2	-1.2
Q3	0.5	2.9	0.5	-0.3	-1.7	0.6	1.6	0.4	0.8	-2.3	3.6
Q4	1.6	0.7	0.5 [†]	1.7 [†]	1.9 [†]	-1.4	2.5	0.6	0.6	-0.6	2.0
2015 Q1	- [†]	-1.6	0.9	0.3	-0.8	-1.4	-2.0	1.0	-1.1	-1.3	-0.5 [†]
Q2	1.3	-2.2	0.4	1.8	-2.0	-0.2	1.5	1.0	0.7	-0.2	-
Q3	0.1	-1.9	-0.4	0.9	-1.2	2.1	-0.9	1.1	-	-1.1	0.4
Q4	0.9	-1.9	1.1	0.7	0.8	0.7	0.5	-1.1	-0.1	2.6	6.0
2016 Q1	2.7	-1.1	-0.9	3.4	-0.1	-1.2	0.2	0.7	0.4	-0.4	-1.7
Q2	0.6	-1.4	0.6	-0.6	1.2	-0.3	0.6	-0.3	-0.4	-3.5	-0.3
Q3	1.0	-1.4	0.4	3.7	-0.9	1.5	0.3	2.2	0.2	0.3 [†]	-3.5
Q4	2.4	0.2	0.3	2.2	0.5	1.3	0.5	0.1	0.4	-1.3	-0.3
2017 Q1	-1.0	1.2 [†]	-0.6	-2.4	1.3	-4.6 [†]	0.8	0.7	0.7	1.0	-2.2
Q2	0.5	-1.8	-1.0	1.0	-0.7	3.1	0.7	-1.0	-0.5	2.0	-2.4
Q3	1.6	-0.5	0.5	0.9	0.1	-1.2	0.4	-0.2	0.8 [†]	-4.5	-2.6
Q4	-0.3	1.7	0.4	0.7	-1.4	-0.6	0.8	0.4	-0.2	1.5	-2.3

[†] indicates that estimates are new or have been revised. The period marked is the earliest in the table to have been revised.

6 Output per hour worked: Services sections

United Kingdom

Seasonally adjusted (2015=100)

	Wholesale & retail trade, motor vehicle repair	Transport & storage	Accommodation & food services	Information & communication	Finance & insurance	Real estate activities	Professional, scientific & technical activities	Admin & support services	Government services	Arts, entertainment & recreation	Other services
Section	G	H	I	J	K	L	M	N	O-Q	R	S-U
Level (£)											
2013	22.8	26.6	16.3	42.0	60.3	244.6	27.4	18.3	24.5	20.5	30.0
Indices											
	DJQ4	DJQ7	DJR2	DJR5	DJS3	DJS6	DJS9	DJT7	DJU2	DJV6	DJV9
2014	96.2	102.6	99.9	95.8	100.9	101.9	99.0	99.8	99.7	103.5	95.4
2015	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2016	105.5	95.4	100.8 [†]	104.9	97.8	99.5	102.6	99.0	100.9	99.7	99.2
2017	107.1	95.0	100.3	107.1	100.5	99.6	106.4	100.7	101.5	94.2	89.6
2014 Q1	95.5	99.5	99.5	95.8	100.6 [†]	100.4	98.9	99.2	99.4	106.7	92.1
Q2	96.0	100.4	100.1	95.4 [†]	101.2	102.3 [†]	97.5	100.3	99.4	102.9	94.2 [†]
Q3	95.5	104.4 [†]	100.2 [†]	95.9	100.3	105.6	98.6 [†]	100.3	99.8	103.5	94.8
Q4	98.0 [†]	106.3	99.8	96.3	101.7	99.5	101.1	99.6	100.1	100.8	100.4
2015 Q1	98.6	103.5	99.8	98.2	102.2	98.6	98.8	100.1	99.9	98.2	97.3
Q2	99.8	100.9	99.9	99.3	100.0	97.8	100.8	100.8	100.5	100.4 [†]	100.0
Q3	101.1	99.2	99.2	101.3	99.7	99.6	100.6	101.3 [†]	100.4	100.8	99.2
Q4	100.6	96.4	101.1	101.2	98.1	104.0	99.8	97.7	99.3 [†]	100.6	103.6
2016 Q1	102.9	96.8	101.0	104.0	97.3	102.2	100.3	99.5	100.4	101.2	101.6
Q2	104.8	95.4	100.6	103.6	98.5	96.3	104.4	95.8	101.5	100.2	99.3
Q3	105.5	94.4	101.1	105.1	97.0	102.2	102.8	99.5	100.7	98.8	99.2
Q4	108.7	94.8	100.7	107.0	98.4	97.1	102.9	101.0	101.1	98.5	96.7
2017 Q1	106.6	94.6	100.5	103.8	101.0	96.9	104.1	101.1	101.0	96.4	93.8
Q2	107.0	94.6	99.4	104.5	100.2	100.2	104.8	100.3	100.7	97.5	91.2
Q3	108.0	94.7	100.4	108.7	100.9	100.6	108.2	99.9	102.0	89.0	88.5
Q4	106.9	96.0	100.8	111.2	100.0	100.5	108.6	101.7	102.4	93.8	84.8
Per cent change on quarter a year ago											
	DJQ6	DJQ9	DJR4	DJR7	DJS5	DJS8	DJT6	DJT9	DJU7	DJV8	DJW3
2014 Q1	4.5	1.9	-3.9	-6.3	-2.9 [†]	-4.9	-0.8	11.0	-0.7	0.1 [†]	-4.8
Q2	3.6	2.0	-2.4	-5.8 [†]	-1.8	-2.0	-1.3	8.8	0.2	-4.5	-0.5
Q3	1.9 [†]	7.5 [†]	0.8 [†]	-3.0	-1.5	6.4 [†]	-0.4	5.9	1.7	-3.9	1.7
Q4	3.7	8.0	1.8	-2.0	-0.2	-0.7	2.6	2.2	1.1	-5.9	13.6 [†]
2015 Q1	3.2	4.0	0.4	2.6	1.7	-1.9	-0.1	0.9	0.5	-8.0	5.6
Q2	4.0	0.6	-0.2	4.1	-1.2	-4.4	3.4	0.5	1.1	-2.4	6.1
Q3	5.9	-4.9	-1.0	5.6	-0.6	-5.6	2.0	1.1	0.6	-2.6	4.6
Q4	2.6	-9.3	1.2	5.1	-3.5	4.6	-1.3	-1.8	-0.8 [†]	-0.2	3.1
2016 Q1	4.4	-6.4	1.1	5.8	-4.8	3.6	1.6	-0.6	0.5	3.0	4.4
Q2	5.0	-5.5	0.7	4.4	-1.5	-1.4	3.6	-4.9	1.1	-0.2	-0.7
Q3	4.4	-4.9	2.0	3.8	-2.7	2.6	2.2	-1.8	0.3	-2.0	0.1
Q4	8.1	-1.7	-0.4	5.7	0.3	-6.7	3.1	3.3	1.9	-2.1	-6.7
2017 Q1	3.5	-2.3	-0.5	-0.2	3.8	-5.1	3.8 [†]	1.6	0.6	-4.7	-7.7
Q2	2.1	-0.9	-1.1	0.8	1.7	4.0	0.4	4.6 [†]	-0.8	-2.7	-8.1
Q3	2.3	0.3	-0.8	3.4	4.0	-1.6	5.3	0.4	1.3	-9.9	-10.9
Q4	-1.7	1.3	0.1	4.0	1.7	3.5	5.5	0.7	1.3	-4.8	-12.3
Per cent change on previous quarter											
	DJQ5	DJQ8	DJR3	DJR6	DJS4	DJS7	DJT2	DJT8	DJU6	DJV7	DJW2
2014 Q1	1.1	1.1	1.4	-2.5 [†]	-1.3 [†]	0.3	0.4	1.9	0.4	-0.4	4.2 [†]
Q2	0.5	0.8 [†]	0.7 [†]	-0.4	0.6	1.8	-1.5	1.0	-	-3.5	2.3
Q3	-0.5	4.0	0.1	0.5	-0.9	3.3 [†]	1.2	- [†]	0.4	0.6 [†]	0.6
Q4	2.6 [†]	1.8	-0.3	0.4	1.4	-5.8	2.6 [†]	-0.7	0.3	-2.6	5.9
2015 Q1	0.6	-2.7	-	2.0	0.5	-0.9	-2.3	0.5	-0.2	-2.6	-3.1
Q2	1.2	-2.5	0.1	1.1	-2.1	-0.8	2.0	0.7	0.5 [†]	2.2	2.7
Q3	1.3	-1.7	-0.7	2.0	-0.4	1.9	-0.2	0.5	-0.1	0.4	-0.8
Q4	-0.5	-2.8	1.9	-0.1	-1.6	4.4	-0.8	-3.6	-1.1	-0.2	4.4
2016 Q1	2.3	0.5	-0.1	2.7	-0.8	-1.8	0.5	1.8	1.2	0.6	-1.9
Q2	1.8	-1.5	-0.4	-0.3	1.2	-5.7	4.0	-3.7	1.1	-0.9	-2.3
Q3	0.7	-1.0	0.6	1.5	-1.6	6.1	-1.5	3.8	-0.8	-1.4	-
Q4	3.1	0.4	-0.4	1.7	1.5	-5.0	0.2	1.5	0.5	-0.3	-2.6
2017 Q1	-2.0	-0.2	-0.2	-3.0	2.6	-0.2	1.2	0.1	-0.1	-2.1	-2.9
Q2	0.4	-	-1.0	0.7	-0.8	3.4	0.6	-0.8	-0.3	1.2	-2.8
Q3	0.9	0.2	0.9	4.1	0.7	0.4	3.3	-0.3	1.3	-8.7	-3.0
Q4	-1.0	1.4	0.5	2.3	-0.8	-0.1	0.3	1.7	0.4	5.3	-4.1

[†] indicates that estimates are new or have been revised. The period marked is the earliest in the table to have been revised.

7 Market sector productivity

United Kingdom

Seasonally adjusted (2015=100)

	Output per worker			Output per hour worked		
	Index	Per cent change on quarter a year ago	Per cent change on previous quarter	Index	Per cent change on quarter a year ago	Per cent change on previous quarter
	GY4	GY5	GY6	GY7	GY8	GY9
2014	99.5	..	..	99.4	..	..
2015	100.0	..	..	100.0	..	..
2016	101.1	..	..	101.2	..	..
2017	102.1	..	..	102.3	..	..
2014 Q1	98.8	0.2	0.2	98.9	–	0.2
Q2	99.3	0.5	0.5	99.1	0.1	0.2
Q3	99.7	1.0	0.4	99.6	1.0	0.5
Q4	100.4	1.8	0.7	99.9	1.2	0.3
2015 Q1	99.8	1.0	–0.6	99.9	1.0	–
Q2	100.6	1.3	0.8	100.4	1.3	0.5
Q3	99.9	0.2	–0.7	100.4	0.8	–
Q4	99.8 [†]	–0.6	–0.1	99.3 [†]	–0.5	–1.0
2016 Q1	100.3	0.5	0.5	100.4	0.5	1.0
Q2	100.7	0.1	0.4	100.9	0.5	0.6
Q3	101.2	1.3	0.5	101.4	1.0	0.4
Q4	102.1	2.3	0.9 [†]	102.1	2.8	0.7 [†]
2017 Q1	101.9	1.7 [†]	–0.1	101.6	1.3 [†]	–0.5
Q2	101.8	1.1	–0.1	101.5	0.6	–0.2
Q3	102.3	1.1	0.5	102.6	1.2	1.1
Q4	102.4	0.4	0.1	103.4	1.3	0.9

[†]indicates that estimates are new or have been revised. The period marked is the earliest in the table to have been revised

8 Output per job and hour worked: Other industries¹

United Kingdom

(2015=100)

Section	Agriculture, forestry and fishing		Construction	
	Output per job	Output per hour worked	Output per job	Output per hour worked
	A	A	F	F
Level (£)				
2013	31 200	14.2	46 300	24.0
Indices				
	DJ4K	DJJ9	DJD8	DJP6
2001	93.2 [†]	90.4 [†]	92.6	90.3
2002	107.4	105.6	96.2	94.6
2003	103.1	99.5	98.5	98.2
2004	98.4	95.0	101.1	100.9
2005	99.7	99.0	95.8	96.1
2006	95.2	92.3	95.3	95.5
2007	92.6	91.7	94.4	94.8
2008	95.6	94.2	91.5	93.2
2009	88.8	81.7	82.6	86.0
2010	83.1	75.9	94.7	97.1
2011	91.7	86.7	97.1	101.3
2012	85.0	84.2	91.1	94.5
2013	93.3	90.2	92.4	93.7
2014	90.7	87.3	97.8	96.8 [†]
2015	100.0	100.0	100.0	100.0
2016	92.6	89.5	101.4	101.4
2017	85.3	82.7	103.9	103.9
Per cent change on previous year				
	DJ4L	DJK2	DJE2	DJP8
2001	2.7	6.0	-0.2	0.1
2002	15.2	16.8	3.9	4.8
2003	-4.0	-5.7	2.3	3.7
2004	-4.5	-4.6	2.7	2.8
2005	1.3	4.2	-5.3	-4.8
2006	-4.5	-6.7	-0.5	-0.6
2007	-2.7	-0.7	-1.0	-0.8
2008	3.2	2.8	-3.1	-1.7 [†]
2009	-7.1	-13.3	-9.7	-7.7
2010	-6.4	-7.1	14.6	12.9
2011	10.3	14.3	2.5	4.3
2012	-7.3	-2.9 [†]	-6.1	-6.7
2013	9.8	7.1	1.4	-0.9
2014	-2.7 [†]	-3.2	5.8	3.3
2015	10.2	14.5	2.3	3.3
2016	-7.4	-10.5	1.4	1.4
2017	-8.0	-7.5	2.5	2.5

¹ Productivity figures for industry F are experimental

[†] indicates that estimates are new or have been revised. The period marked is the earliest in the table to have been revised

9 Productivity measures by region

(UK=100)

		2010	2011	2012	2013	2014	2015	2016
United Kingdom		100.0	100.0	100.0	100.0	100.0	100.0	100.0
Nominal GVA per filled job								
North East	DJDO	84.8	86.2	86.3	85.6	87.1	86.6	88.1
North West	DJDP	91.9	90.9	91.3	90.7	89.4	90.6	91.0
Yorkshire and The Humber	DMBC	86.6	86.9	86.6	86.5	85.2	85.4	84.8
East Midlands	DMBE	86.9	85.8	86.4	87.5	87.9	86.7	86.6
West Midlands	DMDN	87.4	88.0	87.7	87.7	88.9	88.9	89.4
East of England	DMDQ	97.7	97.1	95.9	96.1	95.9	96.2	95.7
London	DMGH	140.9	141.9	139.5	138.2	139.4	137.8	137.7
South East	DMGJ	106.8	105.7	106.2	106.7	105.6	106.6	104.4
South West	DMGK	89.0	87.4	88.5	88.0	88.1	87.6	88.9
England	DMGL	101.9	101.7	101.6	101.6	101.7	101.6	101.4
Wales	DMGM	79.2	81.6	81.5	82.3	79.7	80.6	81.3
Scotland	DMGX	96.6	96.4	95.8	96.9	97.3	97.4	98.3
Northern Ireland	DMOA	84.2	86.5	89.7	87.5	87.0	88.0	87.8
Nominal GVA per hour worked								
North East	DMOB	86.4	88.9	89.1	88.3	88.9	89.0	90.5
North West	DMOH	92.4	92.5	92.3	92.4	89.5	90.5	92.0
Yorkshire and The Humber	DMOK	87.9	87.7	87.6	87.7	86.2	87.3	87.4
East Midlands	DMOL	86.4	86.6	87.3	88.5	89.3	86.0	87.0
West Midlands	DMON	86.6	88.3	87.5	87.5	88.4	86.9	88.6
East of England	DMOO	98.9	98.4	97.2	96.9	97.9	97.8	96.5
London	DMOR	131.9	132.2	130.6	129.9	131.4	130.5	129.3
South East	DMOS	109.8	107.6	107.2	108.2	106.6	108.8	105.5
South West	DMOT	92.1	90.0	91.4	90.8	91.3	90.9	92.5
England	DMOV	101.7	101.6	101.4	101.5	101.5	101.4	101.3
Wales	DMOW	81.5	82.4	84.1	84.2	82.5	82.1	83.4
Scotland	DMOY	97.7	97.4	97.7	97.9	98.9	99.5	99.8
Northern Ireland	DMWA	81.5	84.0	86.4	83.0	82.3	85.3	85.1

† indicates that estimates are new or have been revised. The period marked is the earliest in the table to have been revised.

10 Labour input indices: Workers, productivity jobs and productivity hours

United Kingdom

Seasonally adjusted (2015=100)

Section	Whole economy				Production		Manufacturing		Services	
	Workers	Jobs	Hours	Ratio of jobs to workers	Productivity jobs	Productivity hours	Productivity jobs	Productivity hours	Productivity jobs	Productivity hours
	A-U	A-U	A-U	A-U	B-E	B-E	C	C	G-U	G-U
Indices	TXEL	LNNM	LZVA	TXET	DJW6	DK3S	DJW9	DK3V	DK2G	DK56
2014	98.3	98.4	98.5	100.1	98.8	98.9	99.0	98.9	98.3	98.1
2015	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2016	101.4	101.2	101.4	99.8	99.8	99.1 [†]	99.9	99.1	101.3	101.5
2017	102.5	102.2	102.5	99.7	100.6	99.2	100.9	99.2	102.0	102.5
2014 Q1	97.6	97.7	97.5	100.1	98.1	98.6	98.1	98.3	97.4	97.0
Q2	98.2	98.3	98.4	100.2	98.3	98.7	98.6	98.9	98.3	98.0
Q3	98.6	98.7	98.8	100.1	99.4 [†]	98.9	99.7 [†]	98.9 [†]	98.6	98.5
Q4	98.9	99.0	99.3	100.1	99.5	99.5 [†]	99.8	99.4	98.9 [†]	98.9 [†]
2015 Q1	99.6	99.8	99.6	100.1	100.5	100.2	100.7	100.3	99.6	99.4
Q2	99.5	99.5	99.5	100.1	100.1	100.1	99.9	99.7	99.7	99.5
Q3	100.1	100.1	99.6	99.9	100.1	99.1	99.8	99.0	100.2	99.7
Q4	100.8	100.6	101.3	99.9	99.3	100.6	99.5	101.0	100.6	101.3
2016 Q1	100.9	100.7	101.0	99.8	99.5	99.6	99.4	99.7	100.7	101.1
Q2	101.4	101.2	101.2	99.8	100.2	99.3	100.5	99.5	101.3	101.2
Q3	101.6	101.4	101.6	99.9	99.9	98.6	100.0	98.8	101.6	101.9
Q4	101.7	101.5	101.8	99.8	99.7	98.8	99.7	98.6	101.5	101.8
2017 Q1	102.1	101.8	102.5	99.7	99.4	98.8	99.6	98.7	101.7	102.5
Q2	102.5	102.2	103.0	99.7	100.3	99.7	100.5	99.5	102.1	102.8
Q3	102.5	102.2	102.5	99.7	101.2	99.8	101.7	99.9	102.0	102.2
Q4	102.8	102.5	102.2	99.8	101.4	98.7	101.8	98.6	102.4	102.3
Per cent change on quarter a year ago	DIW9	LNN0	LZVC		DJW8	DK3U	DJX3	DK44	DK2I	DK58
2014 Q1	2.3	2.5	2.5		-0.1	-0.1	0.1 [†]	0.2	2.5	2.2
Q2	2.6	2.8	3.2		0.6	0.4	1.0	0.8	2.8	3.0
Q3	2.4	2.5	2.4		0.6	-0.9 [†]	0.8	-0.5	2.4 [†]	2.5
Q4	2.2	2.2	2.8		0.6	1.0	1.1	1.3	2.2	2.7
2015 Q1	2.1	2.1	2.2		2.5	1.7	2.7	2.0	2.2	2.5
Q2	1.3	1.2	1.1		1.8	1.4	1.4	0.9	1.4	1.5
Q3	1.6	1.4	0.8		0.7	0.1	0.2	0.1	1.6	1.2
Q4	1.9	1.6	2.1		-0.2	1.2	-0.3	1.5 [†]	1.7	2.4
2016 Q1	1.3	0.9	1.4		-1.1	-0.6	-1.3	-0.7	1.1	1.7
Q2	2.0	1.7	1.8		0.2	-0.8	0.5	-0.2	1.6	1.7
Q3	1.5	1.4	1.9		-0.2	-0.5	0.2	-0.2	1.4	2.2
Q4	0.9	0.8	0.4		0.4	-1.9	0.1	-2.4	0.9	0.5
2017 Q1	1.2	1.1	1.6		-0.1	-0.8	0.2	-1.0	1.0	1.4
Q2	1.1	1.0	1.8		-	0.4	0.1	0.1	0.8	1.6
Q3	0.9	0.8	0.9		1.3	1.2	1.7	1.1	0.4	0.3
Q4	1.0	1.0	0.4		1.7	-0.1	2.2	-	0.9	0.5
Per cent change on previous quarter	DIW8	TXAJ	TXBU		DJW7	DK3T	DJX2	DK3Y	DK2H	DK57
2014 Q1	0.8	0.8	0.9		-0.8	0.1	-0.7 [†]	0.2	0.7	0.6
Q2	0.6	0.6	1.0		0.3 [†]	0.1 [†]	0.5	0.5 [†]	0.9	1.1
Q3	0.4	0.4	0.4		1.0	0.3	1.1	0.1	0.3	0.5
Q4	0.4	0.3	0.5		0.2	0.6	0.2	0.5	0.3	0.4 [†]
2015 Q1	0.7	0.8	0.3		1.0	0.7	0.8	0.9	0.7 [†]	0.5
Q2	-0.1	-0.2	-0.1		-0.4	-0.1	-0.7	-0.6	0.1	0.1
Q3	0.7	0.5	0.2		-	-1.0	-0.1	-0.7	0.5	0.2
Q4	0.7	0.6	1.7		-0.8	1.6	-0.3	2.0	0.4	1.6
2016 Q1	0.1	-	-0.4		0.2	-1.1	-0.2	-1.3	0.1	-0.3
Q2	0.5	0.5	0.3		0.8	-0.2	1.1	-0.2	0.6	0.1
Q3	0.1	0.2	0.3		-0.3	-0.7	-0.4	-0.7	0.3	0.7
Q4	0.1	0.1	0.2		-0.2	0.2	-0.4	-0.2	-0.1	-0.1
2017 Q1	0.4	0.3	0.8		-0.3	-	-0.1	0.1	0.2	0.7
Q2	0.4	0.4	0.4		0.9	0.9	1.0	0.9	0.4	0.3
Q3	-	-	-0.5		0.9	0.1	1.2	0.3	-0.1	-0.5
Q4	0.3	0.3	-0.3		0.2	-1.1	0.1	-1.3	0.4	0.1

[†]indicates that estimates are new or have been revised. The period marked is the earliest in the table to have been revised

R1 REVISIONS ANALYSIS

Revisions since previously published estimates

Whole economy								
	Output per worker		Output per job		Output per hour worked		Unit labour costs	
	Per cent change on quarter a year ago	Per cent change on previous quarter	Per cent change on quarter a year ago	Per cent change on previous quarter	Per cent change on quarter a year ago	Per cent change on previous quarter	Per cent change on quarter a year ago	Per cent change on previous quarter
	A4YN	A4YO	LNNP	DMWR	LZVD	TXBB	DMWN	DMWO
2013 Q3	-	-	-	-	-	-	-	-
Q4	-	-	-	-	-	-	-	-
2014 Q1	-	-	-	-	-	-	-	-
Q2	-	-	-	-	-	-	-	-
Q3	-	-	-	-	-	-	-	-
Q4	-	-	-	-	-	-	-	-
2015 Q1	-	-	-	-	-	-	-	-
Q2	-	-	-	-	-	-	-	-
Q3	-	-	-	-	-	-	-	-
Q4	-	-	-	-	-	-	-	-
2016 Q1	-	-	-	-	-	-	-	-
Q2	-	-	-	-	-	-	-	-
Q3	-	-	-	-	-	-	-	-
Q4	-	-	-	-	-	-	-	-
2017 Q1	-	-	-	-	-	0.1	0.1	0.1
Q2	-	-	-	-	-	-0.1	0.3	0.1
Q3	-	0.1	-	0.1	0.1	0.1	0.1	-0.1

Manufacturing						
	Output per job		Output per hour worked		Unit wage costs	
	Per cent change on quarter a year ago	Per cent change on previous quarter	Per cent change on quarter a year ago	Per cent change on previous quarter	Per cent change on quarter a year ago	Per cent change on previous quarter
	DJ4R	DJ4Q	DJK8	DJK7	DJ4J	DJ4I
2013 Q3	-	-	-	-	-	0.1
Q4	-	-	-	-	-	-0.1
2014 Q1	-	-	-	-	-	-
Q2	-	-0.1	-	0.1	-0.1	0.1
Q3	-	-0.1	-	-0.1	-	-
Q4	-	-	-0.1	-0.1	-	-
2015 Q1	-	0.1	-	-	-	-
Q2	-	-	0.1	0.2	-	-
Q3	-	-0.1	-	-0.1	-	0.1
Q4	-	-	-	-0.1	-	-
2016 Q1	-	-	-0.1	-	-	-0.1
Q2	-	-0.1	-	0.2	-	-
Q3	-	-0.1	-	-	-	0.1
Q4	-	0.1	-0.1	-0.2	-	-0.1
2017 Q1	-0.1	-0.1	-	0.1	-	-
Q2	-	-	-	0.2	-	-
Q3	-0.2	-0.2	-0.2	-0.3	0.2	0.3

Services				
	Output per job		Output per hour worked	
	Per cent change on quarter a year ago	Per cent change on previous quarter	Per cent change on quarter a year ago	Per cent change on previous quarter
	DJE5	DJE4	DJQ3	DJQ2
2013 Q3	-	-	-	-
Q4	-	-	-	-
2014 Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-
Q4	-	-	0.1	0.1
2015 Q1	-	-	-	-
Q2	-	-	-	-
Q3	-	-	-	-0.1
Q4	-	-	-	-
2016 Q1	-	-	-	-
Q2	-0.1	-	-	-
Q3	-	-	-	-
Q4	-	-0.1	0.1	0.1
2017 Q1	0.1	0.2	0.1	0.1
Q2	-	-0.1	-0.1	-0.2
Q3	-0.1	-0.1	-0.1	-0.2