Statistical bulletin

Labour productivity, UK: January to March 2016

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.

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1 . Main points

UK labour productivity, as measured by output per hour, grew by 0.5% from the fourth calendar quarter (Oct to Dec) of 2015 to the first calendar quarter (Jan to Mar) of 2016 and was some 17% below an extrapolation based on its pre-downturn trend.

Output per hour in services rose by 0.5% in the first quarter on the previous quarter and was 1.1% higher than a year earlier. Output per hour in manufacturing rose by 0.7% on the previous quarter but was 1.5% lower than a year earlier.

Output per worker and output per job were 0.3% and 0.4% higher in the first quarter compared with the previous quarter, respectively. Average hours worked were broadly unchanged on the quarter, resulting in similar growth rates for each of these measures.

Whole economy unit labour costs were 0.4% higher in the first quarter compared with the previous quarter and 1.9% higher than the same quarter last year, as earnings and other labour costs have outpaced productivity. Unit wage costs in manufacturing grew by 0.4% on the previous quarter and by 2.5% compared with Quarter 1 2015.

This edition forms part of the ONS quarterly productivity bulletin which also includes an over-arching commentary, summaries of recently published estimates, and new quarterly estimates of public service productivity.

2 . Interpreting these statistics

This release reports labour productivity estimates for the first quarter (Jan to Mar) of 2016 for the whole economy and a range of sub-industries, together with selected estimates of unit labour costs. Labour productivity measures the amount of real (inflation-adjusted) economic output that is produced by a unit of labour input (measured in this release in terms of workers, jobs and hours worked) and is an important indicator of economic performance.

Labour costs make up around two-thirds of the overall cost of production of UK economic output. Unit labour costs are therefore a closely watched indicator of inflationary pressures in the economy.

Output statistics in this release are consistent with the latest Quarterly National Accounts published on 30 June 2016. Labour input measures are consistent with the latest Labour Market Statistics as described further in the "Quality and methodology" sections of this bulletin.

Whole economy output (measured by gross value added – GVA) increased by 0.5% in the first quarter of 2016, while the Labour Force Survey (LFS) shows that both the number of workers and jobs increased by 0.1%. Hours worked stayed broadly constant over this period. This combination of movements in outputs and labour inputs implies that labour productivity across the whole economy rose by 0.5% in terms of output per hour, while output per worker and output per job increased by 0.3% and 0.4%, respectively.

Differences between the growth rates of output per worker and output per job reflect changes in the ratio of jobs to workers. This ratio remained broadly unchanged in Quarter 1. Differences between these measures and output per hour reflect movements in average hours per job and per worker. Between Quarter 4 2015 and Quarter 1 2016, average hours per worker remained unchanged at 32.0. As output per hour accounts for changes in average hours worked it is a more comprehensive indicator of labour productivity and is the main focus of the commentary in this release.

Labour productivity equation

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

This equation explains how labour productivity is calculated and how it can be derived using growth rates for GVA and labour inputs.

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, while unit wage costs (UWCs) are a narrower measure, excluding non-wage labour costs. Growth of ULCs can be decomposed as:

ULC equation

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

This equation explains how ULCs are calculated and how they can be derived from growth of labour costs per unit of labour (such as labour costs per hour worked) and growth of labour productivity.

In the first quarter, whole economy output per hour rose by 0.5% and ULCs grew by 0.4%. Plugging these values into the ULC equation and re-arranging yields an implied decrease of approximately 0.9% in labour costs per hour. This implied movement differs from our other information on labour remuneration such as Average Weekly Earnings (AWE) and Indices of Labour Costs per Hour (ILCH), chiefly because the labour cost component includes estimated remuneration of self- employed labour, which is not included in AWE and ILCH.

3 . General commentary

Productivity estimates in this release are derived from estimates of the output of goods and services and of labour inputs; the latter measured in terms of workers, jobs ('Productivity Jobs') and hours worked ('Productivity Hours'). In general, estimates of output and of labour inputs are measured independently of one another, with labour productivity calculated as the ratio of the two estimates. However, there are some activities where, in the absence of direct measures of output, labour inputs are used as a proxy, with productivity either assumed to be unchanged over time (as in public administration and defence) or assumed to move in line with the productivity trend in a measurable equivalent activity (as in a few small components of the index of services).

Figure 1: Contributions to growth of whole economy output per hour

Seasonally Adjusted, Cumulative quarterly changes, quarter 1 2008 to quarter 1 2016, UK

Figure 1: Contributions to growth of whole economy output per hour

Seasonally Adjusted, Cumulative quarterly changes, quarter 1 2008 to quarter 1 2016, UK

Percentage points

5

0

-5

2008 Q1   2009 Q1   2010 Q1   2011 Q1   2012 Q1   2013 Q1   2014 Q1   2015 Q1   2016 Q1

— Total   ● ABDE   ● Manufacturing   ● Construction   ● Financial services

● Other services   ● Allocation
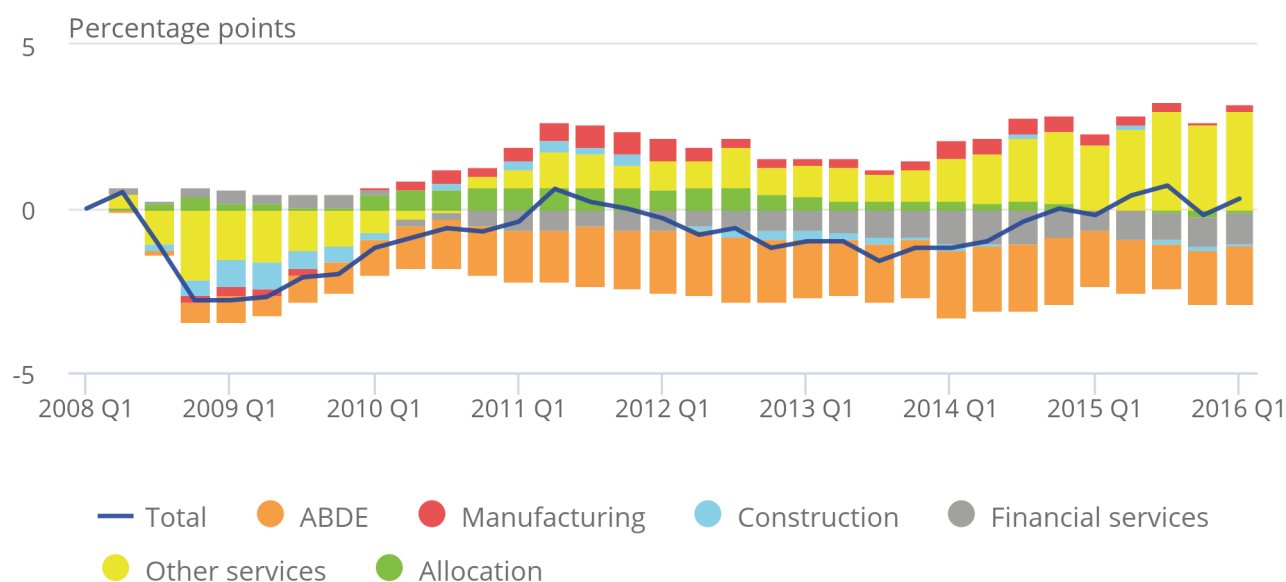
Source: Office for National Statistics

Notes:

1. ABDE refers to Agriculture, Forestry and Fishing (section A), Mining and Quarrying (section B), Electricity, Gas, Steam and Air Conditioning Supply (section D) and Water Supply, Sewerage, Waste Management and Remediation Activities (section E).

Figure 1 shows contributions to whole economy output per hour in terms of cumulative changes since Q1 2008. In this presentation, the contributions of individual component industries are computed, holding relative prices and industry weights constant. Allocation components are then computed for each industry, primarily as the change in relative industry shares weighted by relative productivity levels. At the aggregate level, net allocation is the sum of the individual allocation components, some negative (where relative shares are falling) and some positive. Thus a positive net allocation contribution implies a shift in shares of hours worked and/or relative prices towards higher productivity industries and vice versa.

Figure 1 shows positive net allocation contributions over 2010-12, but these have unwound over 2013-14, such that allocation has had a small negative impact on output per hour in the latest quarter, compared with Q1 2008. This primarily reflects changes in the relative share of industry ABDE (non-manufacturing production and agriculture). This in turn reflects changes in the nominal GVA share of ABDE in total GVA (driven by, among other factors, changes in the price of oil and gas), together with large movements in the share of hours worked in this industry.

Output per hour in Q1 2016 was almost unchanged from the level in Q1 2008, before the economic downturn, and a little lower than in the middle of 2011. Comparing the present position with 5 years ago, the direct contribution of non-financial services has increased and the ABDE contribution is broadly unchanged. However, the direct contributions of manufacturing, construction and financial services have weakened, as has the allocation component.

Figure 2: Whole economy unit labour costs

Seasonally adjusted, year on year changes and contributions, quarter 1 2008 to quarter 1 2016, UK

Figure 2: Whole economy unit labour costs

Seasonally adjusted, year on year changes and contributions, quarter 1 2008 to quarter 1 2016, UK

- Unit Labour Costs
- Output per hour (sign reversed)
- Labour costs per hour
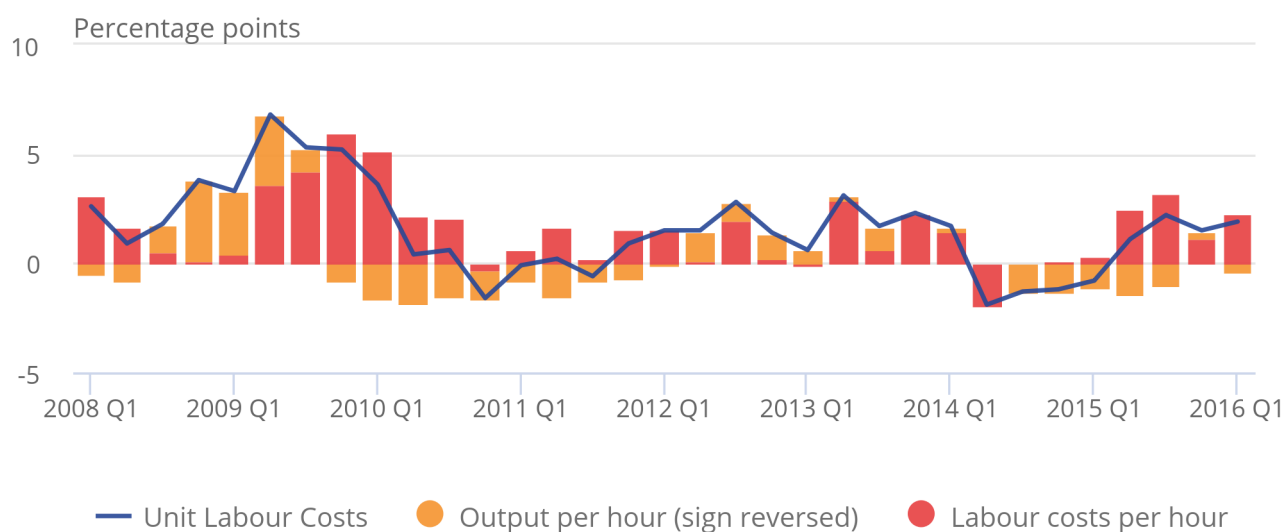
Source: Office for National Statistics

Figure 2 shows annual changes in ULCs since Q1 2008, with the bars representing the decomposition of ULC changes into changes in labour costs per hour and changes in output per hour. The latter have been reversed in sign, so a negative bar represents positive productivity growth. Estimates of labour costs per hour are backed out of estimates of unit labour costs and of output per hour. Unit labour costs (ULCs) are calculated with labour income as the numerator and GVA as the denominator. Labour income is total compensation of employees from the National Accounts plus an estimate of the labour income of the self-employed. The use of National Accounts income concepts means that labour costs per hour can differ from ONS estimates of Indices of Labour Costs per Hour, which relate to employees only and are not benchmarked to the National Accounts. Since labour income is around two-thirds of total GVA in current prices, sustained growth of ULCs above or below 2% could be inconsistent with delivery of the government's inflation target.

The average growth of ULCs since 2008 has in fact been around 1.4% per year, although with considerable variation. A notable feature of Figure 2 is the similarity between the period since the start of 2014 compared with the earlier pattern over 2011-12, before the post-downturn recovery in output per hour slowed.

Analysis of ULC growth by industry (experimental statistics, available in Sectional Unit Labour Costs) shows a continuation of the recent trend for ULC growth in manufacturing to outpace ULC growth in services. In 2015, the respective growth rates were 3.5% for manufacturing (slightly different from the growth of manufacturing unit wage costs, series DIX4, shown in Table 2 of the PDF version of this release) and 0.7% for services. Since 2008, manufacturing ULC growth has averaged 1.9% per year compared with growth of 1.1% per year for services. This mainly reflects the relative weakness of manufacturing productivity.

This contrasts sharply with the pre-downturn pattern. Over the period 1997-2007, ULC growth in manufacturing was 1.0% per year on average, compared with 3.1% per year for services. Combined with static or falling prices for manufacturing recorded in 2014 and 2015, the upward trend in manufacturing ULCs implies a narrowing of profit margins.

Notes: 1. Throughout this release, Q1 is Quarter 1 January to March, Q2 Quarter 2 April to June, Q3 Quarter 3 July to September and Q4 Quarter 4 October to December

4 . Whole economy labour productivity measures

This release contains estimates for whole economy output per worker, output per job and output per hour worked. It also contains estimates for market sector output per worker and output per hour worked. ONS publish an index of market sector gross value added (GVA) as part of the Quarterly National Accounts (CDID L48H), based on weightings of industry level GVA. The main industries with sizeable non-market shares are industries L (real estate) and OPQ (government services). Estimates of market sector workers are derived by subtracting workers in central and local government from the Labour Force Survey (LFS) total. Estimates of hours worked are based on LFS micro-data which record employment in a range of non-market institutions such as charities and government agencies.

Figure 3: Whole economy output per hour

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 1 (Jan to Mar) 2016
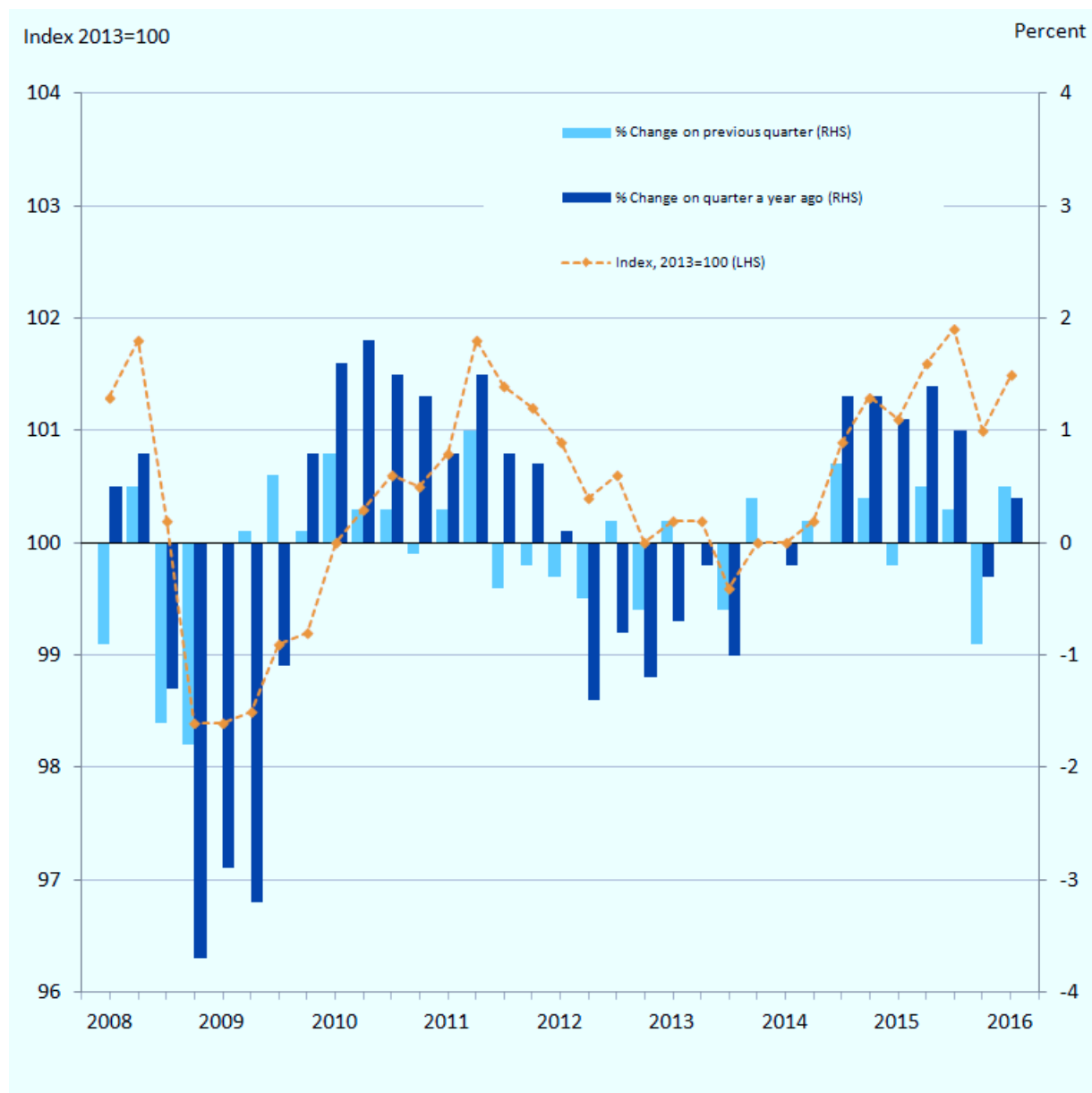
As shown in Figure 3, in Quarter 1 2016 output per hour grew by 0.5%. This growth primarily reflects growth in GVA while hours remained constant, as shown in Figure 4. However, jobs grew in Quarter 1 by 0.1%.

Figure 4: Components of productivity measures

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 1 (Jan to Mar) 2016

Figure 4: Components of productivity measures

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 1 (Jan to Mar) 2016

Source: Office for National Statistics

Figure 5 shows market sector output per hour as index levels and changes alongside the equivalent index for the whole economy. Since the market sector constitutes the bulk of the economy (over 80% in terms of hours worked) it is not surprising that the two series are closely related. However, close investigation reveals some differences in trend growth rates pre- and post-downturn. The market sector series grew a little faster than the whole economy series prior to the economic downturn (2.5% per annum versus 2.2%) but has grown a little slower since the downturn (-0.3% per annum versus zero).

Figure 5: Market sector output per hour worked

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 1 (Jan to Mar) 2016

5 . Manufacturing labour productivity measures

Figure 6: Cumulative contributions to growth of manufacturing output per hour since Q1 2008

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 1 (Jan to Mar) 201

Figure 6: Cumulative contributions to growth of manufacturing output per hour since Q1 2008

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 1 (Jan to Mar) 201

Percentage points

[Chart showing cumulative contributions with legend: Total, CA-CD+CM, CE+CF, CG+CH, CI-CL, Allocation. X-axis from Q1 2008 to Q1 2016, Y-axis from -10 to 10]
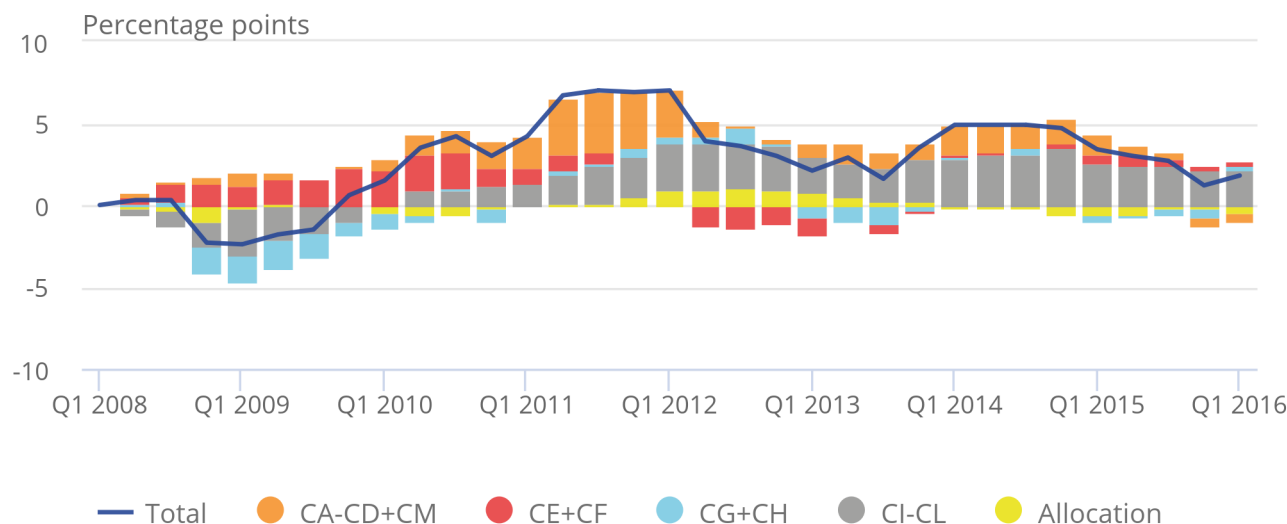
Source: Office for National Statistics

Notes:

1. CA-CD + CM refers to Food products, beverages and tobacco (CA), Textiles, wearing apparel & leather (CB), Wood & paper products & printing (CC) and Coke & refined petroleum products (CD). CM refers to Other Manufacturing.

2. CE,CF refers to Chemical and Pharmaceutical products.

3. CG,CH refers to Rubber, plastics & other non-metallic minerals (CG), Basic metals and metal products (CH).

4. CI-CL refers to Computer products, Electrical equipment (CI,CJ), Machinery & equipment (CK) and Transport equipment (CL).

Figure 6 shows the cumulative growth of output per hour in manufacturing relative to Q1 2008, decomposed into contributions of broad component industries. Here the allocation element captures the effect of changes in output shares and relative prices within manufacturing.

Initially during the downturn, a fall in manufacturing productivity masked divergent movements among sub-industries as the contribution from growth in some industries was outweighed by a fall in others. However, by Q2 2011 manufacturing productivity was 6.8% higher than in Q1 2008. While all sub-industries contributed positively to this growth, the contribution from chemical, pharmaceutical, basic metals, metal products, rubber, plastics, and other non-metallic minerals was relatively small.

Since 2011, however, manufacturing productivity has fallen. One factor behind this is the declining contribution from CA-CD and CM. Cumulative productivity growth relative to Q1 2008 fell 5.3 percentage points in the 5 years to Q1 2016 – 3 percentage points of which can be attributed to these sub-industries. As of Q1 2016, manufacturing productivity stands 1.8% higher than in Q1 2008 – now largely driven by the 2.1 percentage point contribution from the sub-industry grouping CI-CL.

The weakness of manufacturing productivity since 2011 has been a defining feature of the UK productivity puzzle, the apparent and short-lived recovery in 2014 notwithstanding. As shown in Figure 7 this chiefly reflects relatively strong manufacturing employment and hours worked.

Figure 7: Components of manufacturing productivity measures

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 1 (Jan to Mar) 2016

Figure 7: Components of manufacturing productivity measures

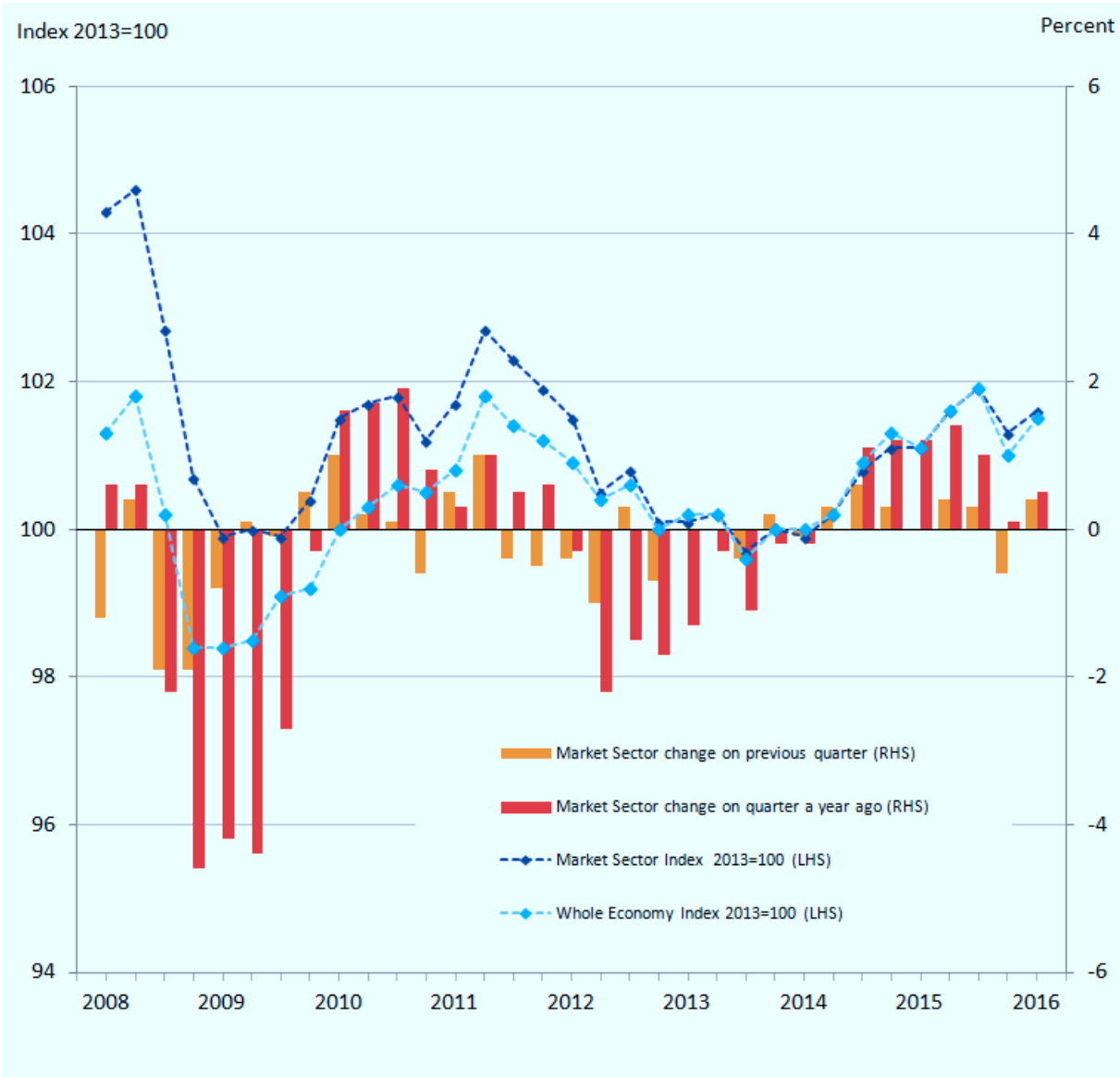Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 1 (Jan to Mar) 2016

Source: Office for National Statistics

More information on the labour productivity of sub-divisions of manufacturing is available in Tables 3 and 4 of this release, and in the tables at the end of the pdf version of this statistical bulletin. Care should be taken in interpreting quarter on quarter movements in productivity estimates for individual sub-divisions, as small sample sizes of the source data can cause volatility.

In annual terms, output per hour fell in 2015 in 7 of the 10 manufacturing industries identified in the labour productivity system, including machinery and equipment (down 11.3%), rubber, plastics etc (down 9.9%), and textiles etc (down 4.6%). The only industries to record positive productivity growth in 2015 were basic metals etc (up 3.3%), chemicals and pharmaceuticals (up 2.3%) and transport equipment (up 1.1%).

6 . Services labour productivity measures

Figure 8: Cumulative contributions to services output per hour since quarter 1 2008

Seasonally Adjusted, quarter 1 2008 to quarter 1 2016, UK

Figure 8: Cumulative contributions to services output per hour since quarter 1 2008

Seasonally Adjusted, quarter 1 2008 to quarter 1 2016, UK
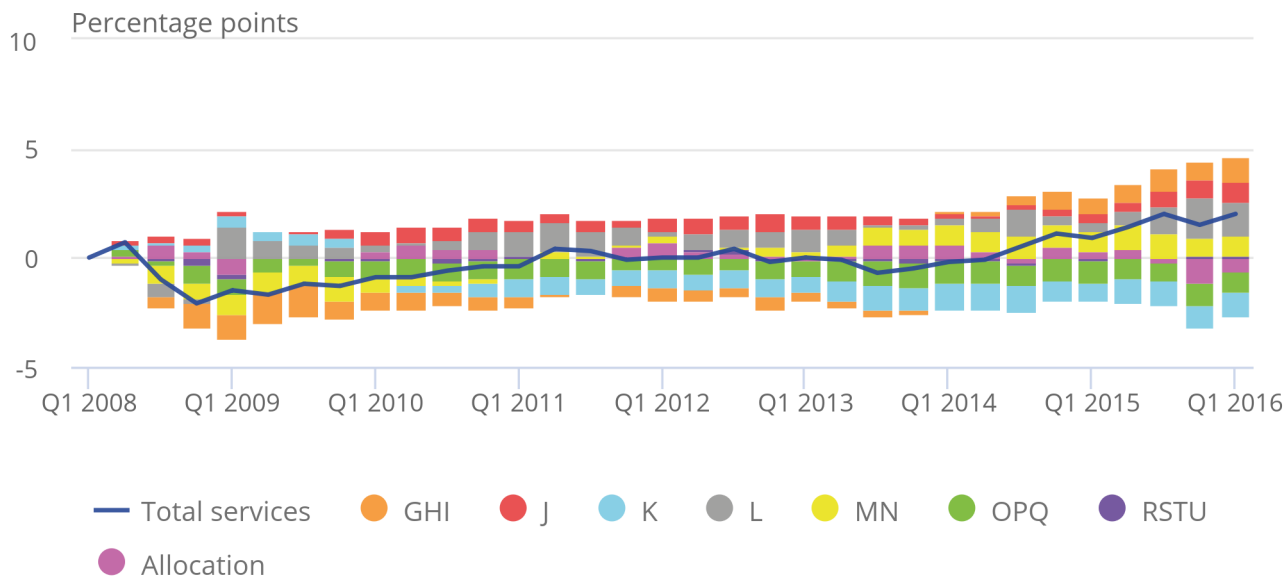
Source: Office for National Statistics

Notes:

1. GHI refers to Wholesale and retail trade; repair of motor vehicles and motorcycles (G), Transportation and storage (H) and Accommodation and food service activities (I).

2. J refers to Information and communication.

3. K refers to Financial and insurance activities.

4. L refers to Real Estate activities.

5. MN refers to Professional, scientific and technical activities (M), Administrative and support service activities (N).

6. MN refers to Professional, scientific and technical activities (M), Administrative and support service activities (N).

7. OPQ refers to Government Services.

8. RSTU refers to Other Services.

Figure 8 provides a decomposition of the growth of output per hour in services since Q1 2008. Until 2013, services productivity remained broadly unchanged relative to Q1 2008. However, headline productivity over this period was pulled down by large negative contributions from government services (industries OPQ) and finance and insurance activities (K). Since 2013 the contributions from these industries has remained relatively unchanged, but increasingly positive contributions from other industries have driven growth. The distribution, accommodation and food services industries (G-I) in particular contributed 1.5 percentage points toward the increase in cumulative services productivity growth from -0.7% in Q3 2013 to 2% in Q1 2016.

Figure 9: Components of Services Productivity Measures

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 1 (Jan to Mar) 2016

Figure 9: Components of Services Productivity Measures

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 1 (Jan to Mar) 2016
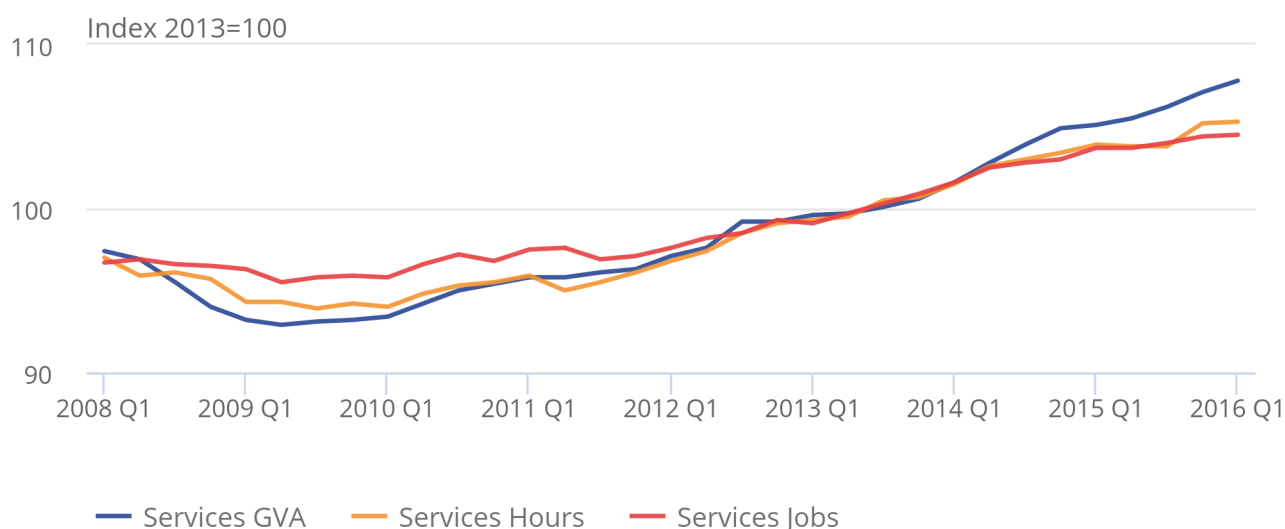
Source: Office for National Statistics

More information on labour productivity of services industries is available in Tables 5 and 6 of this release.

In general, the dispersion of labour productivity growth rates across service industries is less pronounced than within manufacturing, but the dispersion of productivity 'levels' is more pronounced. When interpreting productivity levels it should be borne in mind that labour productivity in industry L (real estate) is affected by the National Accounts concept of output from owner-occupied housing, which adds to the numerator but without a corresponding component in the denominator. Estimates of productivity in this industry in particular have consequently been affected by revisions to the value of imputed rent introduced in Blue Book 2016 (see section 7).

Over 2015 as a whole, output per hour grew in 8 of the 11 service industries identified in the labour productivity system, including other services (up 5.6%) and information and communication (up 5.3%). Output per hour is estimated to have fallen in arts, entertainment, and recreation (4.7%), and accommodation and food services (1.3%).

7 . What's changed in this release?

Revisions

Compared with the previous edition published on 7 April 2016, several sources of revisions have been incorporated, including:

- Revisions resulting from Blue Book 2016 methodological improvements, incorporated in the latest Quarterly National Accounts, affect all periods for GVA and unit labour costs.

- Improvements in the coverage of businesses on the Inter-Departmental Business Register, used by ONS as the sampling frame for its business surveys, affect the entire series of industry splits for productivity jobs and productivity hours.

- Revisions to labour force statistics – which include taking on the latest population estimates and a seasonal adjustment review – affect all periods for productivity jobs and hours from 2012 Q3 onwards.

- All seasonally adjusted series have undergone seasonal adjustment review, affecting all periods of the series.

Table A summarises differences between first published estimates for each of the statistics in the first column with the estimates for the same statistics published 3 years later. This summary is based on 5 years of data, that is, for first estimates of quarters between Quarter 2 2008 and Quarter 1 2013, which is the last quarter for which a 3-year revision history is available. The averages of these differences with and without regard to sign are shown in the right hand columns of the table. These can be compared with the estimated values in the latest quarter (Quarter 1 2016) shown in the second column. Additional information on revisions to these and other statistics published in this release is available in the dataset of this release.

Table A: Revisions analysis, quarter 1 (Jan to Mar) 2008 to quarter 1 (Jan to Mar) 2016, UK

Whole economy

Change on quarter a year ago	Value in latest period (per cent)	Revisions between first publication and estimates three years later (Relating to Period: 2008Q2 - 2013Q1)	
		Average over 5 years (bias)	Average over 5 years without regard to sign (average absolute revision)
Output per worker	0.6	0.3	1.0
Output per job	0.9	0.3	1.0
Output per hour	0.4	0.2	0.9
Unit labour costs	1.9	-0.3	1.2
Unit wage costs	0.9	-0.6	1.2

Source: Office for National Statistics

This revisions analysis shows that whole economy labour productivity growth estimates have tended to be revised up very slightly over time (on a year-on-year basis). Growth of unit labour costs and unit wage costs has tended to be revised downwards. If revisions over the next three years were to be the same as the average for the past five years, growth of output per hour for the year to the first quarter of 2016 would be revised from 0.4% to 0.6%. Growth of unit labour costs would be revised from 1.9% to 1.6%, while growth of unit wage costs would be revised from 0.9% to 0.3% over the same period.

A research note, 'sources of revisions to labour productivity estimates' is available on the archived version of our website, and further commentary on the nature and sources of the revisions introduced in this quarter is available in the UK Productivity Bulletin – Introduction.

Other developments

This statistical bulletin is published as part of a package of material relating to productivity including over-arching commentary, summaries of recently published estimates and an article describing proposed new quarterly estimates of public service productivity. We welcome your views on these developments. Feedback can be sent to productivity@ons.gsi.gov.uk or by telephone to Ciaren Taylor on +44 (0)1633 455619.

8 . Quality and methodology

This statistical bulletin presents labour productivity estimates for the UK. More detail can be found on the Productivity measures page on our website. Index numbers are referenced to 2013=100, are classified to the 2007 revision to the Standard Industrial Classification (SIC) and are seasonally adjusted. Quarter on previous quarter changes in output per job and output per hour worked for some of the manufacturing sub-divisions and services sections should be interpreted with caution as the small sample sizes used can cause volatility.

A revised and updated Quality and Methodology Information report for labour productivity was published in March 2012. This report describes the intended uses of the statistics presented in this publication, their quality and methods used to produce them. It also includes more information on the uses and limitations of labour productivity estimates.

Notes on sources

The measure of output used in these statistics is the chain 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). 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 this would be reflected in apparent improved measured productivity performance in that region relative to the others. At the whole economy level, real GVA is balanced to other estimates of economic activity, primarily from the expenditure approach. Below the whole economy level, real GVA is generally estimated by deflating measures of turnover; these estimates are not balanced through the supply-use framework and the deflation method is likely to produce biased estimates. This should be borne in mind in interpreting labour productivity estimates below the whole economy level.

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 the ONS Labour Market statistical bulletin, in 3 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.

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 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.

Manufacturing unit wage costs are calculated as the ratio of manufacturing average weekly earnings (AWE) to manufacturing output per filled job. On 28 November 2012 we published Productivity measures: sectional unit labour costs describing new measures of unit labour costs 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 unit labour costs.

Other data on productivity

We publish International comparisons of labour productivity in levels and growth rates for the G7 countries. More international data on productivity are available from the OECD, Eurostat, and the Conference Board.

We publish experimental estimates of Multi-factor productivity (MFP), which decompose output growth into the contributions that can be accounted for by labour and capital inputs. In these estimates, the contribution of labour is further decomposed into quantity (hours worked) and quality dimensions.

We also publish experimental indices of labour costs per hour. These differ from the concept of labour costs used in the unit labour cost estimates in this release. The main difference is that experimental indices of labour costs per hour relate to employees only, whereas unit labour costs also include the labour remuneration of the self-employed.

Lastly, we publish a range of Public sector productivity measures and related articles. These measures define productivity differently from that used in our labour productivity and MFP estimates. Further information can be found in Phelps (2010) and in an information note published on 4 June 2015.

More information on the range of our productivity estimates can be found in the ONS Productivity Handbook.

1 Labour productivity key measures
United Kingdom

<div align="right">Seasonally adjusted (2013=100)</div>

	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
Section	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†
2012	99.8†	99.8†	100.5†	100.2†	101.9†	100.4†	101.9†	99.9†	100.4†
2013	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2014	101.0	100.9	100.6	101.1	101.3	102.1	102.3	100.8	100.7
2015	101.6	101.6	101.4	100.0	100.5	99.8	100.0	102.0	101.8
2012 Q2	99.4†	99.3†	100.4†	100.1†	101.9†	99.9†	101.4†	99.4†	100.3†
Q3	100.3	100.3	100.6	99.2	100.7	99.6	101.1	100.7	100.7
Q4	99.5	99.5	100.0	98.3	100.3	98.8	100.4	99.9	100.1
2013 Q1	100.1	100.2	100.2	99.4	99.3	99.6	99.6	100.5	100.3
Q2	100.0	100.0	100.2	100.5	100.5	100.5	100.4	100.0	100.2
Q3	100.0	99.9	99.6	99.8	99.2	99.6	99.1	99.8	99.6
Q4	99.9	99.9	100.0	100.2	101.0	100.3	100.9	99.7	99.9
2014 Q1	100.2	100.2	100.0	101.5	101.4	102.5	102.3	100.0	100.1
Q2	100.7	100.5	100.2	101.5	101.5	102.5	102.3	100.3	100.2
Q3	101.3	101.2	100.9	100.7	101.4	101.7	102.4	101.0	100.8
Q4	101.8	101.8	101.3	100.6	101.0	101.6	102.2	101.9	101.5
2015 Q1	101.3	101.3	101.1	99.5	100.4	100.2	100.8	101.4	101.2
Q2	101.8	101.7	101.6	100.2	100.7	99.9	100.4	101.7	101.7
Q3	101.6	101.6	101.9	100.0	101.3	99.3	100.1	102.1	102.3
Q4	101.6	101.8	101.0	100.2	99.5	99.6	98.6	102.6	101.8
2016 Q1	101.9	102.2	101.5	99.6	100.0	99.5	99.3	103.2	102.3
Per cent change on quarter a year ago									
	A4YN†	LNNP†	LZVD†	DJ4O	DJK5†	DJ4R	DJK8†	DJE5†	DJQ3†
2012 Q2	−0.1†	−0.1†	−1.4†	−3.7	−3.8†	−2.5	−2.8†	1.2†	−0.5†
Q3	0.1	0.3	−0.8	−4.9†	−5.3	−3.0†	−3.3	1.6	0.1
Q4	−0.6	−0.6	−1.2	−5.8	−4.9	−4.3	−4.0	0.8	−0.1
2013 Q1	0.1	0.2	−0.7	−3.6	−5.2	−3.4	−4.8	1.0	−
Q2	0.6	0.7	−0.2	0.4	−1.4	0.6	−1.0	0.6	−0.1
Q3	−0.3	−0.4	−1.0	0.6	−1.5	−	−2.0	−0.9	−1.1
Q4	0.4	0.4	−	1.9	0.7	1.5	0.5	−0.2	−0.2
2014 Q1	0.1	−	−0.2	2.1	2.1	2.9	2.7	−0.5	−0.2
Q2	0.7	0.5	−	1.0	1.0	2.0	1.9	0.3	−
Q3	1.3	1.3	1.3	0.9	2.2	2.1	3.3	1.2	1.2
Q4	1.9	1.9	1.3	0.4	−	1.3	1.3	2.2	1.6
2015 Q1	1.1	1.1	1.1	−2.0	−1.0	−2.2	−1.5	1.4	1.1
Q2	1.1	1.2	1.4	−1.3	−0.8	−2.5	−1.9	1.4	1.5
Q3	0.3	0.4	1.0	−0.7	−0.1	−2.4	−2.2	1.1	1.5
Q4	−0.2	−	−0.3	−0.4	−1.5	−2.0	−3.5	0.7	0.3
2016 Q1	0.6	0.9	0.4	0.1	−0.4	−0.7	−1.5	1.8	1.1
Per cent change on previous quarter									
	A4YO†	DMWR†	TXBB†	DJ4N†	DJK4†	DJ4Q†	DJK7†	DJE4†	DJQ2†
2012 Q2	−0.6†	−0.7†	−0.5†	−2.9†	−2.8†	−3.1†	−3.1†	−0.1†	−†
Q3	0.9	1.0†	0.2	−0.9	−1.2	−0.3	−0.3	1.3	0.4
Q4	−0.8	−0.8	−0.6	−0.9	−0.4	−0.8	−0.7	−0.8	−0.6
2013 Q1	0.6	0.7	0.2	1.1	−1.0	0.8	−0.8	0.6	0.2
Q2	−0.1	−0.2	−	1.1	1.2	0.9	0.8	−0.5	−0.1
Q3	−	−0.1	−0.6	−0.7	−1.3	−0.9	−1.3	−0.2	−0.6
Q4	−0.1	−	0.4	0.4	1.8	0.7	1.8	−0.1	0.3
2014 Q1	0.3	0.3	−	1.3	0.4	2.2	1.4	0.3	0.2
Q2	0.5	0.3	0.2	−	0.1	−	−	0.3	0.1
Q3	0.6	0.7	0.7	−0.8	−0.1	−0.8	0.1	0.7	0.6
Q4	0.5	0.6	0.4	−0.1	−0.4	−0.1	−0.2	0.9	0.7
2015 Q1	−0.5	−0.5	−0.2	−1.1	−0.6	−1.4	−1.4	−0.5	−0.3
Q2	0.5	0.4	0.5	0.7	0.3	−0.3	−0.4	0.3	0.5
Q3	−0.2	−0.1	0.3	−0.2	0.6	−0.6	−0.3	0.4	0.6
Q4	−	0.2	−0.9	0.2	−1.8	0.3	−1.5	0.5	−0.5
2016 Q1	0.3	0.4	0.5	−0.6	0.5	−0.1	0.7	0.6	0.5

†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 (2013=100)

	Whole economy		Manufacturing
	Unit labour costs	Unit wage costs	Unit wage costs
Section	A-U	A-U	C
Indices			
	LNNL	LNNK	DIX4
2012	98.2[†]	98.2[†]	97.4[†]
2013	100.0	100.0	100.0
2014	99.3	100.4	100.0
2015	100.3	101.9	103.6
2012 Q2	97.9[†]	98.4[†]	97.8[†]
Q3	98.5	98.5	98.5
Q4	98.3	99.1	99.5
2013 Q1	98.4	97.8	99.0
Q2	100.9	100.9	99.8
Q3	100.1	100.4	100.5
Q4	100.6	100.9	100.7
2014 Q1	100.1	100.6	99.2
Q2	99.0	100.3	99.5
Q3	98.8	99.8	100.2
Q4	99.3	100.7	100.9
2015 Q1	99.3	101.1	102.2
Q2	100.1	101.5	103.5
Q3	101.0	102.7	104.3
Q4	100.8	102.2	104.4
2016 Q1	101.2	102.0	104.8
Per cent change on quarter a year ago			
	DMWN	LOJE	DJ4J
2012 Q2	1.5[†]	1.5[†]	5.3[†]
Q3	2.8	2.2	5.1
Q4	1.4	2.7	6.4
2013 Q1	0.6	1.0	5.8
Q2	3.1	2.5	2.0
Q3	1.7	1.9	2.0
Q4	2.3	1.7	1.2
2014 Q1	1.7	2.8	0.2
Q2	−1.9	−0.6	−0.3
Q3	−1.3	−0.6	−0.3
Q4	−1.2	−0.2	0.2
2015 Q1	−0.8	0.5	3.0
Q2	1.1	1.1	4.0
Q3	2.2	2.8	4.1
Q4	1.5	1.5	3.5
2016 Q1	1.9	0.9	2.5
Per cent change on previous quarter			
	DMWO	DMWL	DJ4I
2012 Q2	−[†]	1.6[†]	4.5
Q3	0.6	0.1	0.7[†]
Q4	−0.2	0.6	1.0
2013 Q1	0.2	−1.3	−0.5
Q2	2.5	3.2	0.8
Q3	−0.8	−0.5	0.7
Q4	0.4	0.5	0.2
2014 Q1	−0.4	−0.3	−1.5
Q2	−1.1	−0.3	0.3
Q3	−0.2	−0.5	0.7
Q4	0.5	0.8	0.7
2015 Q1	−	0.5	1.3
Q2	0.8	0.3	1.3
Q3	0.9	1.2	0.8
Q4	−0.1	−0.5	0.1
2016 Q1	0.4	−0.2	0.4

[†] 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

	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
2012	102.2†	106.6†	96.5†	97.9†	99.9†	103.0†	103.6†	112.8†	94.1†	95.4†
2013	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2014	102.6	94.9	98.6	103.7	104.6	101.8	100.8	111.3	100.7	104.4
2015	99.0	93.0	97.2	105.2	96.5	104.1	98.7	96.4	102.2	100.2
2012 Q2	102.6†	103.9†	93.9†	95.6†	101.7†	102.4†	103.5†	114.1†	92.6†	96.6†
Q3	102.0	104.5	93.9	97.4	98.8	105.8	104.7	110.9	94.8	91.0
Q4	101.0	107.7	95.8	95.8	99.2	100.6	104.4	110.3	94.3	89.2
2013 Q1	100.3	106.5	97.5	96.2	101.1	99.5	103.2	99.0	100.4	96.9
Q2	101.3	100.2	100.7	105.2	98.0	98.9	102.7	98.1	99.6	98.8
Q3	98.8	98.2	101.5	98.2	98.8	99.6	97.4	100.5	100.5	102.1
Q4	99.5	95.1	100.2	100.3	102.1	102.0	96.7	102.3	99.4	102.2
2014 Q1	103.8	97.9	99.7	102.3	106.6	102.7	99.0	108.8	100.5	105.3
Q2	103.0	99.5	98.3	101.6	106.1	101.3	101.0	113.5	101.8	103.0
Q3	102.2	91.0	98.3	104.6	104.4	101.2	101.9	112.9	99.2	103.9
Q4	101.4	91.2	98.1	106.2	101.2	101.8	101.1	110.0	101.4	105.2
2015 Q1	99.8	94.4	98.6	106.0	98.4	103.9	97.6	100.1	101.8	100.1
Q2	98.1	94.4	96.8	105.0	94.7	105.9	100.9	96.0	103.8	100.5
Q3	99.1	93.2	97.0	104.7	96.6	101.6	98.7	94.7	101.5	99.6
Q4	99.1	90.1	96.5	105.2	96.3	105.0	97.5	94.9	101.5	100.4
2016 Q1	98.0	90.8	97.0	103.8	97.3	106.6	96.3	95.5	100.4	101.6
Per cent change on quarter a year ago										
	DJ56	DJ5E	DJ5H	DJ5K	DJ5N	DJB6	DJB9	DJC4	DJD2	DJD7
2012 Q2	−1.6†	−12.8	−0.8	−11.7†	−0.7	2.7†	6.0†	1.5†	3.8	−15.0
Q3	−0.7	−15.6†	−5.4†	−6.2	−3.9†	7.3	8.8	−5.4	2.8†	−17.9†
Q4	−2.8	−10.6	−2.9	−5.1	−4.2	0.6	10.7	−6.7	−0.9	−21.3
2013 Q1	−2.8	−3.4	−4.7	−6.5	1.3	−3.6	1.5	−14.7	6.0	−7.4
Q2	−1.3	−3.6	7.2	10.0	−3.6	−3.4	−0.8	−14.0	7.6	2.3
Q3	−3.1	−6.0	8.1	0.8	–	−5.9	−7.0	−9.4	6.0	12.2
Q4	−1.5	−11.7	4.6	4.7	2.9	1.4	−7.4	−7.3	5.4	14.6
2014 Q1	3.5	−8.1	2.3	6.3	5.4	3.2	−4.1	9.9	0.1	8.7
Q2	1.7	−0.7	−2.4	−3.4	8.3	2.4	−1.7	15.7	2.2	4.3
Q3	3.4	−7.3	−3.2	6.5	5.7	1.6	4.6	12.3	−1.3	1.8
Q4	1.9	−4.1	−2.1	5.9	−0.9	−0.2	4.6	7.5	2.0	2.9
2015 Q1	−3.9	−3.6	−1.1	3.6	−7.7	1.2	−1.4	−8.0	1.3	−4.9
Q2	−4.8	−5.1	−1.5	3.3	−10.7	4.5	−0.1	−15.4	2.0	−2.4
Q3	−3.0	2.4	−1.3	0.1	−7.5	0.4	−3.1	−16.1	2.3	−4.1
Q4	−2.3	−1.2	−1.6	−0.9	−4.8	3.1	−3.6	−13.7	0.1	−4.6
2016 Q1	−1.8	−3.8	−1.6	−2.1	−1.1	2.6	−1.3	−4.6	−1.4	1.5
Per cent change on previous quarter										
	DJ55	DJ58	DJ5G	DJ5J	DJ5M	DJB3	DJB8	DJC3	DJC6	DJD4
2012 Q2	−0.6†	−5.8†	−8.2	−7.1†	1.9†	−0.8	1.8†	−1.6†	−2.2	−7.7†
Q3	−0.6	0.6	–†	1.9	−2.9	3.3†	1.2	−2.8	2.4†	−5.8
Q4	−1.0	3.1	2.0	−1.6	0.4	−4.9	−0.3	−0.5	−0.5	−2.0
2013 Q1	−0.7	−1.1	1.8	0.4	1.9	−1.1	−1.1	−10.2	6.5	8.6
Q2	1.0	−5.9	3.3	9.4	−3.1	−0.6	−0.5	−0.9	−0.8	2.0
Q3	−2.5	−2.0	0.8	−6.7	0.8	0.7	−5.2	2.4	0.9	3.3
Q4	0.7	−3.2	−1.3	2.1	3.3	2.4	−0.7	1.8	−1.1	0.1
2014 Q1	4.3	2.9	−0.5	2.0	4.4	0.7	2.4	6.4	1.1	3.0
Q2	−0.8	1.6	−1.4	−0.7	−0.5	−1.4	2.0	4.3	1.3	−2.2
Q3	−0.8	−8.5	–	3.0	−1.6	−0.1	0.9	−0.5	−2.6	0.9
Q4	−0.8	0.2	−0.2	1.5	−3.1	0.6	−0.8	−2.6	2.2	1.3
2015 Q1	−1.6	3.5	0.5	−0.2	−2.8	2.1	−3.5	−9.0	0.4	−4.8
Q2	−1.7	–	−1.8	−0.9	−3.8	1.9	3.4	−4.1	2.0	0.4
Q3	1.0	−1.3	0.2	−0.3	2.0	−4.1	−2.2	−1.4	−2.2	−0.9
Q4	–	−3.3	−0.5	0.5	−0.3	3.3	−1.2	0.2	–	0.8
2016 Q1	−1.1	0.8	0.5	−1.3	1.0	1.5	−1.2	0.6	−1.1	1.2

† 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

	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
2012	102.9†	106.2†	98.5†	96.5†	104.8†	108.2†	103.8†	114.4†	93.7†	95.8†
2013	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2014	103.8	94.1	98.9	104.4	106.5	102.4	103.5	109.3	99.3	102.9
2015	99.1	89.7	97.0	106.8	96.0	105.8	100.7	97.0	100.3	101.4
2012 Q2	102.9†	105.0†	95.7†	94.2†	106.5†	105.9†	103.5†	118.2†	93.1†	96.3†
Q3	102.6	103.8	97.8	93.6	103.3	113.9	105.2	111.4	93.3	89.8
Q4	100.0	109.3	99.2	95.3	102.2	106.9	105.6	110.1	94.0	91.0
2013 Q1	100.4	102.1	99.9	95.8	98.4	101.6	104.2	97.6	98.7	97.5
Q2	101.6	98.8	102.1	102.9	99.2	99.1	100.4	97.8	99.9	98.5
Q3	99.5	99.2	98.9	99.1	100.3	96.9	94.6	101.3	101.3	101.2
Q4	98.5	99.9	99.1	102.2	102.1	102.4	100.9	103.4	100.1	102.8
2014 Q1	102.4	101.6	98.1	104.2	106.0	103.2	99.6	108.3	100.7	104.6
Q2	103.5	100.4	98.9	103.8	108.9	100.4	103.4	111.3	98.2	101.3
Q3	104.6	89.4	99.5	103.6	110.1	101.5	105.1	108.4	98.6	102.2
Q4	104.6	85.0	99.0	106.0	100.9	104.4	105.9	109.1	99.6	103.3
2015 Q1	100.9	87.8	101.4	107.5	96.6	104.4	101.2	101.0	100.0	102.8
Q2	100.1	88.2	97.6	108.6	94.0	109.0	100.6	96.9	100.4	102.4
Q3	98.3	92.1	96.0	106.3	95.9	106.2	101.6	96.3	100.3	101.6
Q4	97.2	90.8	92.9	104.8	97.3	103.6	99.5	93.7	100.6	98.6
2016 Q1	97.2	85.4	93.2	105.2	100.5	107.8	97.1	97.8	99.6	100.1
Per cent change on quarter a year ago										
	DJL3	DJL6	DJM3	DJM6	DJM9	DJN6	DJN9	DJO7	DJP2	DJP5
2012 Q2	−2.7†	−8.4†	−2.2†	−14.3†	4.1†	−1.0†	4.7†	4.3†	3.8†	−15.1†
Q3	−0.4	−20.9	−4.6	−13.9	−0.9	9.7	11.1	−6.5	−1.2	−18.7
Q4	−4.1	−9.4	−1.7	−7.5	−6.8	2.2	13.9	−7.6	−2.1	−17.6
2013 Q1	−5.2	−4.3	−1.3	−7.0	−8.1	−4.1	3.5	−17.1	4.4	−8.0
Q2	−1.3	−5.9	6.7	9.2	−6.9	−6.4	−3.0	−17.3	7.3	2.3
Q3	−3.0	−4.4	1.1	5.9	−2.9	−14.9	−10.1	−9.1	8.6	12.7
Q4	−1.5	−8.6	−0.1	7.2	−0.1	−4.2	−4.5	−6.1	6.5	13.0
2014 Q1	2.0	−0.5	−1.8	8.8	7.7	1.6	−4.4	11.0	2.0	7.3
Q2	1.9	1.6	−3.1	0.9	9.8	1.3	3.0	13.8	−1.7	2.8
Q3	5.1	−9.9	0.6	4.5	9.8	4.7	11.1	7.0	−2.7	1.0
Q4	6.2	−14.9	−0.1	3.7	−1.2	2.0	5.0	5.5	−0.5	0.5
2015 Q1	−1.5	−13.6	3.4	3.2	−8.9	1.2	1.6	−6.7	−0.7	−1.7
Q2	−3.3	−12.2	−1.3	4.6	−13.7	8.6	−2.7	−12.9	2.2	1.1
Q3	−6.0	3.0	−3.5	2.6	−12.9	4.6	−3.3	−11.2	1.7	−0.6
Q4	−7.1	6.8	−6.2	−1.1	−3.6	−0.8	−6.0	−14.1	1.0	−4.5
2016 Q1	−3.7	−2.7	−8.1	−2.1	4.0	3.3	−4.1	−3.2	−0.4	−2.6
Per cent change on previous quarter										
	DJL2	DJL5	DJM2	DJM5	DJM8	DJN5	DJN8	DJO6	DJO9	DJP4
2012 Q2	−2.8†	−1.6†	−5.4	−8.5†	−0.6†	−†	2.8†	0.4†	−1.5†	−9.2†
Q3	−0.3	−1.1	2.2†	−0.6	−3.0	7.6	1.6	−5.8	0.2	−6.7
Q4	−2.5	5.3	1.4	1.8	−1.1	−6.1	0.4	−1.2	0.8	1.3
2013 Q1	0.4	−6.6	0.7	0.5	−3.7	−5.0	−1.3	−11.4	5.0	7.1
Q2	1.2	−3.2	2.2	7.4	0.8	−2.5	−3.6	0.2	1.2	1.0
Q3	−2.1	0.4	−3.1	−3.7	1.1	−2.2	−5.8	3.6	1.4	2.7
Q4	−1.0	0.7	0.2	3.1	1.8	5.7	6.7	2.1	−1.2	1.6
2014 Q1	4.0	1.7	−1.0	2.0	3.8	0.8	−1.3	4.7	0.6	1.8
Q2	1.1	−1.2	0.8	−0.4	2.7	−2.7	3.8	2.8	−2.5	−3.2
Q3	1.1	−11.0	0.6	−0.2	1.1	1.1	1.6	−2.6	0.4	0.9
Q4	−	−4.9	−0.5	2.3	−8.4	2.9	0.8	0.6	1.0	1.1
2015 Q1	−3.5	3.3	2.4	1.4	−4.3	−	−4.4	−7.4	0.4	−0.5
Q2	−0.8	0.5	−3.7	1.0	−2.7	4.4	−0.6	−4.1	0.4	−0.4
Q3	−1.8	4.4	−1.6	−2.1	2.0	−2.6	1.0	−0.6	−0.1	−0.8
Q4	−1.1	−1.4	−3.2	−1.4	1.5	−2.4	−2.1	−2.7	0.3	−3.0
2016 Q1	−	−5.9	0.3	0.4	3.3	4.1	−2.4	4.4	−1.0	1.5

† 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 (2013=100)

	Wholesale & retail trade, motor vehicle repair	Transport & storage	Accommo-dation & food services	Information & commu-nication	Finance & insurance	Real estate activities	Profes-sional, scientific & technical activities	Admin & support services	Government services	Arts, enter-tainment & 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											
	DJE6	DJE9	DJF4	DJF7	DJG5	DJH4	DJH7	DJI2	DJI5	DJJ3	DJJ6
2012	95.8†	98.3†	105.1†	101.1†	101.2†	104.2†	98.4†	96.1†	101.0†	104.7†	103.4†
2013	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2014	104.4	105.2	98.2	96.7	97.8	101.2	100.9	103.2	100.2	97.8	102.9
2015	107.3	107.1	98.9	101.1	97.8	103.9	101.4	105.8	100.3	93.8	107.6
2012 Q2	94.7†	98.4†	104.9†	101.2†	101.6†	105.9†	96.8†	94.1†	100.7†	103.7†	103.6†
Q3	96.9	98.0	106.4	100.9	101.9	103.7	98.8	96.5	102.1	111.2	105.9
Q4	96.5	98.4	104.4	100.1	100.2	103.6	97.8	98.9	101.1	101.3	100.5
2013 Q1	98.1	101.2	103.2	100.8	101.0	103.5	99.9	96.7	101.0	100.0	103.8
Q2	99.6	100.3	101.0	100.6	100.3	99.9	100.1	99.6	99.7	100.1	100.5
Q3	100.8	98.6	99.1	99.9	99.7	98.0	100.9	101.0	99.6	99.5	98.5
Q4	101.4	100.0	96.7	98.6	99.0	98.5	99.1	102.7	99.7	100.3	97.3
2014 Q1	102.8	102.9	97.0	96.4	97.8	99.6	98.8	102.7	99.8	98.5	101.5
Q2	104.0	103.6	98.2	96.4	97.1	101.5	100.0	102.9	99.9	99.4	100.5
Q3	104.5	106.4	98.8	95.9	96.4	102.7	101.4	103.5	100.5	97.5	104.4
Q4	106.1	107.7	98.9	98.1	100.0	101.0	103.2	103.6	100.6	95.8	105.3
2015 Q1	105.8	108.5	99.0	98.7	99.5	100.6	101.3	104.6	99.6	94.5	105.0
Q2	106.9	107.4	98.9	99.7	97.0	102.0	101.9	105.3	100.3	93.5	105.9
Q3	107.6	106.8	98.2	101.5	96.5	106.0	101.0	106.9	100.7	92.7	107.9
Q4	108.7	105.8	99.4	104.4	98.2	106.8	101.5	106.2	100.7	94.3	111.5
2016 Q1	110.8	104.2	99.5	105.4	99.2	105.3	101.3	107.4	100.7	94.4	111.5
Per cent change on quarter a year ago											
	DJE8	DJF3	DJF6	DJF9	DJG8	DJH6	DJH9	DJI4	DJI7	DJJ5	DJJ8
2012 Q2	−1.0†	−1.8†	1.9†	4.4†	1.0	−0.7†	0.4†	1.4†	3.0†	2.2†	1.7†
Q3	0.6	−2.1	2.5	1.7	−0.3†	−2.0	0.6	4.2	3.0	8.6	4.2
Q4	0.8	−1.3	–	1.3	−2.4	−1.0	−0.7	8.1	1.4	−0.2	−2.6
2013 Q1	3.2	2.8	−1.2	−1.5	–	0.1	−0.2	2.1	0.8	−2.4	0.4
Q2	5.2	1.9	−3.7	−0.6	−1.3	−5.7	3.4	5.8	−1.0	−3.5	−3.0
Q3	4.0	0.6	−6.9	−1.0	−2.2	−5.5	2.1	4.7	−2.4	−10.5	−7.0
Q4	5.1	1.6	−7.4	−1.5	−1.2	−4.9	1.3	3.8	−1.4	−1.0	−3.2
2014 Q1	4.8	1.7	−6.0	−4.4	−3.2	−3.8	−1.1	6.2	−1.2	−1.5	−2.2
Q2	4.4	3.3	−2.8	−4.2	−3.2	1.6	−0.1	3.3	0.2	−0.7	–
Q3	3.7	7.9	−0.3	−4.0	−3.3	4.8	0.5	2.5	0.9	−2.0	6.0
Q4	4.6	7.7	2.3	−0.5	1.0	2.5	4.1	0.9	0.9	−4.5	8.2
2015 Q1	2.9	5.4	2.1	2.4	1.7	1.0	2.5	1.9	−0.2	−4.1	3.4
Q2	2.8	3.7	0.7	3.4	−0.1	0.5	1.9	2.3	0.4	−5.9	5.4
Q3	3.0	0.4	−0.6	5.8	0.1	3.2	−0.4	3.3	0.2	−4.9	3.4
Q4	2.5	−1.8	0.5	6.4	−1.8	5.7	−1.6	2.5	0.1	−1.6	5.9
2016 Q1	4.7	−4.0	0.5	6.8	−0.3	4.7	–	2.7	1.1	−0.1	6.2
Per cent change on previous quarter											
	DJE7	DJF2	DJF5	DJF8	DJG6	DJH5	DJH8	DJI3	DJI6	DJJ4	DJJ7
2012 Q2	−0.4†	–†	0.4†	−1.1†	0.6†	2.4†	−3.3†	−0.6†	0.5†	1.2†	0.2†
Q3	2.3	−0.4	1.4	−0.3	0.3	−2.1	2.1	2.6	1.4	7.2	2.2
Q4	−0.4	0.4	−1.9	−0.8	−1.7	−0.1	−1.0	2.5	−1.0	−8.9	−5.1
2013 Q1	1.7	2.8	−1.1	0.7	0.8	−0.1	2.1	−2.2	−0.1	−1.3	3.3
Q2	1.5	−0.9	−2.1	−0.2	−0.7	−3.5	0.2	3.0	−1.3	0.1	−3.2
Q3	1.2	−1.7	−1.9	−0.7	−0.6	−1.9	0.8	1.4	−0.1	−0.6	−2.0
Q4	0.6	1.4	−2.4	−1.3	−0.7	0.5	−1.8	1.7	0.1	0.8	−1.2
2014 Q1	1.4	2.9	0.3	−2.2	−1.2	1.1	−0.3	–	0.1	−1.8	4.3
Q2	1.2	0.7	1.2	–	−0.7	1.9	1.2	0.2	0.1	0.9	−1.0
Q3	0.5	2.7	0.6	−0.5	−0.7	1.2	1.4	0.6	0.6	−1.9	3.9
Q4	1.5	1.2	0.1	2.3	3.7	−1.7	1.8	0.1	0.1	−1.7	0.9
2015 Q1	−0.3	0.7	0.1	0.6	−0.5	−0.4	−1.8	1.0	−1.0	−1.4	−0.3
Q2	1.0	−1.0	−0.1	1.0	−2.5	1.4	0.6	0.7	0.7	−1.1	0.9
Q3	0.7	−0.6	−0.7	1.8	−0.5	3.9	−0.9	1.5	0.4	−0.9	1.9
Q4	1.0	−0.9	1.2	2.9	1.8	0.8	0.5	−0.7	–	1.7	3.3
2016 Q1	1.9	−1.5	0.1	1.0	1.0	−1.4	−0.2	1.1	–	0.1	–

† 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 (2013=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
2012	96.9†	98.4†	107.3†	102.4†	101.4†	100.9†	99.2†	96.0†	101.2†	102.6†	104.2†
2013	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2014	103.4	105.3	99.2	96.4	97.3	100.3	100.0	106.7	99.8	96.3	102.5
2015	107.3	107.3	97.9	101.6	98.7	102.5	100.1	107.0	100.1	91.8	108.2
2012 Q2	96.7†	98.5†	108.0†	102.6†	102.3†	101.8†	98.2†	94.2†	101.0†	102.3†	105.0†
Q3	97.9	98.6	108.0	101.6	101.1	102.5	98.3	95.5	101.7	107.1	108.6
Q4	96.7	98.8	105.8	103.6	101.0	101.7	99.1	99.3	100.4	100.6	99.8
2013 Q1	98.2	100.0	102.5	101.9	101.9	103.4	99.8	95.3	101.2	98.7	103.9
Q2	99.5	100.4	101.6	101.0	100.4	101.6	100.3	98.6	100.2	100.5	101.0
Q3	100.7	99.3	98.7	98.7	98.5	97.0	100.5	101.6	99.1	100.8	99.7
Q4	101.6	100.3	97.2	98.4	99.2	97.9	99.5	104.4	99.5	100.0	95.4
2014 Q1	102.4	101.6	98.7	96.0	96.8	98.3	99.6	105.7	99.7	98.5	99.3
Q2	103.0	103.0	99.4	95.8	96.4	100.3	99.0	107.4	99.7	96.2	100.8
Q3	102.8	107.0	99.7	96.6	96.5	104.0	100.1	107.3	100.0	97.1	101.9
Q4	105.2	109.4	98.8	97.3	99.4	98.6	101.4	106.4	99.7	93.3	108.0
2015 Q1	105.5	108.9	98.3	99.3	100.8	98.7	99.1	106.7	99.7	90.3	105.1
Q2	106.7	107.8	97.6	99.6	98.1	99.6	100.9	107.5	100.3	92.1	107.6
Q3	108.9	107.3	96.8	102.7	98.2	103.6	100.8	108.1	100.5	92.6	108.4
Q4	108.2	105.3	98.9	104.6	97.6	108.1	99.4	105.6	99.7	92.1	111.8
2016 Q1	109.8	105.0	99.8	105.1	97.8	105.5	98.8	107.2	100.1	91.9	111.1

Per cent change on quarter a year ago

	DJQ6	DJQ9	DJR4	DJR7	DJS5	DJS8	DJT6	DJT9	DJU7	DJV8	DJW3
2012 Q2	−1.3†	−4.7†	0.9†	3.5†	0.8†	−4.0†	−2.8†	−0.2†	0.4†	−0.6†	3.8†
Q3	−0.8	−3.6	0.1	1.3	−1.2	−2.2	−1.6	3.0	0.9	6.8	8.7
Q4	0.4	−1.8	−1.6	5.7	−0.7	–	−0.8	6.2	−1.3	3.2	−3.7
2013 Q1	2.2	2.2	−4.7	0.2	0.6	5.8	−1.2	0.3	−0.6	−1.8	0.5
Q2	2.9	1.9	−5.9	−1.6	−1.9	−0.2	2.1	4.7	−0.8	−1.8	−3.8
Q3	2.9	0.7	−8.6	−2.9	−2.6	−5.4	2.2	6.4	−2.6	−5.9	−8.2
Q4	5.1	1.5	−8.1	−5.0	−1.8	−3.7	0.4	5.1	−0.9	−0.6	−4.4
2014 Q1	4.3	1.6	−3.7	−5.8	−5.0	−4.9	−0.2	10.9	−1.5	−0.2	−4.4
Q2	3.5	2.6	−2.2	−5.1	−4.0	−1.3	−1.3	8.9	−0.5	−4.3	−0.2
Q3	2.1	7.8	1.0	−2.1	−2.0	7.2	−0.4	5.6	0.9	−3.7	2.2
Q4	3.5	9.1	1.6	−1.1	0.2	0.7	1.9	1.9	0.2	−6.7	13.2
2015 Q1	3.0	7.2	−0.4	3.4	4.1	0.4	−0.5	0.9	–	−8.3	5.8
Q2	3.6	4.7	−1.8	4.0	1.8	−0.7	1.9	0.1	0.6	−4.3	6.7
Q3	5.9	0.3	−2.9	6.3	1.8	−0.4	0.7	0.7	0.5	−4.6	6.4
Q4	2.9	−3.7	0.1	7.5	−1.8	9.6	−2.0	−0.8	–	−1.3	3.5
2016 Q1	4.1	−3.6	1.5	5.8	−3.0	6.9	−0.3	0.5	0.4	1.8	5.7

Per cent change on previous quarter

	DJQ5	DJQ8	DJR3	DJR6	DJS4	DJS7	DJT2	DJT8	DJU6	DJV7	DJW2
2012 Q2	0.6†	0.7†	0.5†	0.9	1.0†	4.2†	−2.8†	−0.8†	−0.8†	1.8†	1.5†
Q3	1.2	0.1	–	−1.0†	−1.2	0.7	0.1	1.4	0.7	4.7	3.4
Q4	−1.2	0.2	−2.0	2.0	−0.1	−0.8	0.8	4.0	−1.3	−6.1	−8.1
2013 Q1	1.6	1.2	−3.1	−1.6	0.9	1.7	0.7	−4.0	0.8	−1.9	4.1
Q2	1.3	0.4	−0.9	−0.9	−1.5	−1.7	0.5	3.5	−1.0	1.8	−2.8
Q3	1.2	−1.1	−2.9	−2.3	−1.9	−4.5	0.2	3.0	−1.1	0.3	−1.3
Q4	0.9	1.0	−1.5	−0.3	0.7	0.9	−1.0	2.8	0.4	−0.8	−4.3
2014 Q1	0.8	1.3	1.5	−2.4	−2.4	0.4	0.1	1.2	0.2	−1.5	4.1
Q2	0.6	1.4	0.7	−0.2	−0.4	2.0	−0.6	1.6	–	−2.3	1.5
Q3	−0.2	3.9	0.3	0.8	0.1	3.7	1.1	−0.1	0.3	0.9	1.1
Q4	2.3	2.2	−0.9	0.7	3.0	−5.2	1.3	−0.8	−0.3	−3.9	6.0
2015 Q1	0.3	−0.5	−0.5	2.1	1.4	0.1	−2.3	0.3	–	−3.2	−2.7
Q2	1.1	−1.0	−0.7	0.3	−2.7	0.9	1.8	0.7	0.6	2.0	2.4
Q3	2.1	−0.5	−0.8	3.1	0.1	4.0	−0.1	0.6	0.2	0.5	0.7
Q4	−0.6	−1.9	2.2	1.9	−0.6	4.3	−1.4	−2.3	−0.8	−0.5	3.1
2016 Q1	1.5	−0.3	0.9	0.5	0.2	−2.4	−0.6	1.5	0.4	−0.2	−0.6

† 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

	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
	GYY4	GYY5	GYY6	GYY7	GYY8	GYY9
2012	100.1†	..	..	100.7†	..	..
2013	100.0	..	..	100.0	..	..
2014	100.8	..	..	100.5	..	..
2015	101.6	..	..	101.5	..	..
2012 Q2	99.6†	−1.2†	−1.2	100.5†	−2.2†	−1.0
Q3	100.5	−1.0	0.9†	100.8	−1.5	0.3†
Q4	99.4	−1.8	−1.0	100.1	−1.7	−0.7
2013 Q1	100.0	−0.8	0.6	100.1	−1.3	−
Q2	100.1	0.5	0.1	100.2	−0.3	−
Q3	100.0	−0.5	−0.1	99.7	−1.1	−0.4
Q4	99.9	0.5	−	100.0	−0.2	0.2
2014 Q1	100.0	−	0.1	99.9	−0.2	−0.1
Q2	100.5	0.4	0.5	100.2	−	0.3
Q3	101.1	1.1	0.5	100.8	1.1	0.6
Q4	101.8	1.9	0.7	101.1	1.2	0.3
2015 Q1	101.3	1.3	−0.5	101.1	1.2	−
Q2	101.9	1.3	0.6	101.6	1.4	0.4
Q3	101.6	0.5	−0.3	101.9	1.0	0.3
Q4	101.6	−0.1	0.1	101.3	0.1	−0.6
2016 Q1	101.9	0.6	0.2	101.6	0.5	0.4

†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 industries[1]
United Kingdom

(2013=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
1999	86.5[†]	85.4[†]	100.3[†]	96.8[†]
2000	95.0	92.7	100.5	96.3
2001	97.5	98.2	100.4	96.4
2002	112.3	114.7	104.3	101.1
2003	107.7	108.1	106.7	104.8
2004	102.8	103.1	109.5	107.7
2005	104.2	107.5	103.8	102.7
2006	99.4	100.1	103.3	102.0
2007	96.6	99.4	102.3	101.2
2008	99.6	102.0	99.1	99.4
2009	92.4	88.4	89.5	91.8
2010	86.2	81.8	102.6	103.6
2011	95.2	93.5	105.2	108.1
2012	88.4	91.0	98.8	101.0
2013	100.0	100.0	100.0	100.0
2014	100.5	99.9	104.9	102.2
2015	107.6	111.9	104.3	102.9

Per cent change on previous year

	DJ4L	DJK2	DJE2	DJP8
1999	16.7[†]	17.3[†]	–	0.6
2000	9.8	8.6	0.2	–0.4
2001	2.6	6.0	–0.1[†]	0.1[†]
2002	15.2	16.7	3.9	4.8
2003	–4.1	–5.8	2.3	3.7
2004	–4.5	–4.6	2.6	2.7
2005	1.4	4.2	–5.2	–4.7
2006	–4.6	–6.8	–0.5	–0.6
2007	–2.8	–0.8	–1.0	–0.8
2008	3.1	2.7	–3.1	–1.7
2009	–7.2	–13.4	–9.7	–7.6
2010	–6.7	–7.5	14.6	12.8
2011	10.4	14.4	2.5	4.4
2012	–7.1	–2.7	–6.1	–6.6
2013	13.1	9.9	1.2	–0.9
2014	0.5	–0.1	4.9	2.2
2015	7.1	12.1	–0.6	0.6

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

		2008	2009	2010	2011	2012	2013	2014
United Kingdom		100.0	100.0	100.0	100.0	100.0	100.0	100.0
Nominal GVA per filled job								
North East	DJDO	85.3	83.7	83.9	85.3	86.7	86.0	86.9
North West	DJDP	92.0	91.7	91.1	88.8	89.9	89.7	86.9
Yorkshire and The Humber	DMBC	89.3	88.9	87.5	86.8	86.8	86.6	86.7
East Midlands	DMBE	88.0	86.7	87.6	86.4	86.5	88.0	89.6
West Midlands	DMDN	87.2	86.5	87.9	88.4	88.0	87.8	87.1
East of England	DMDQ	100.3	98.8	99.2	98.0	96.5	96.7	98.0
London	DMGH	137.3	138.5	139.5	142.9	139.2	137.3	137.7
South East	DMGJ	106.5	106.4	106.6	105.9	107.0	108.0	107.4
South West	DMGK	91.0	90.1	90.8	88.7	89.8	89.4	89.2
England	DMGL	102.1	101.7	102.0	101.9	101.9	101.8	101.8
Wales	DMGM	80.2	81.1	79.3	81.8	81.7	82.0	80.0
Scotland	DMGX	93.6	97.1	95.5	94.1	94.0	95.1	95.8
Northern Ireland	DMOA	87.3	86.4	84.6	86.0	88.2	86.4	86.0
Nominal GVA per hour worked								
North East	DMOB	86.3	85.2	85.6	87.9	88.9	88.6	88.6
North West	DMOH	93.1	93.0	91.6	90.3	90.5	91.3	87.0
Yorkshire and The Humber	DMOK	91.5	90.2	88.7	87.5	87.5	87.8	87.6
East Midlands	DMOL	88.3	86.7	87.1	87.2	87.1	89.0	91.1
West Midlands	DMON	87.9	86.3	87.1	88.8	87.4	87.6	86.7
East of England	DMOO	101.1	100.1	100.4	99.4	97.5	97.5	100.0
London	DMOR	130.0	130.6	130.6	133.1	129.7	129.2	129.9
South East	DMOS	107.6	108.4	109.5	107.8	109.2	109.4	108.5
South West	DMOT	93.9	93.1	94.0	91.3	93.5	92.1	92.5
England	DMOV	102.2	101.7	101.8	101.9	101.5	101.7	101.6
Wales	DMOW	81.6	82.4	81.6	82.6	84.8	84.0	82.9
Scotland	DMOY	93.5	97.5	96.6	95.1	95.9	96.1	97.5
Northern Ireland	DMWA	83.0	82.2	81.9	83.5	86.2	81.9	81.4

†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 (2013=100)

	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
Section	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
2012	98.9†	98.9†	98.2†	100.0	100.5†	98.8†	100.6†	99.1†	98.4†	97.9†
2013	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2014	102.4	102.5	102.8	100.1	100.5	100.2	100.8	100.6	102.5	102.6
2015	104.2	104.1	104.3	100.0	102.8	102.3	103.0	102.7	104.0	104.2
2012 Q2	98.7†	98.8†	97.8†	100.1†	100.8†	99.0†	100.9†	99.4†	98.2†	97.4†
Q3	99.1	99.0	98.8	99.9	101.8	100.3	101.5	100.1	98.5	98.5
Q4	99.5	99.5	99.0	100.0	100.5	98.5	100.7	99.0	99.3	99.1
2013 Q1	99.3	99.2	99.2	99.9	99.8	99.9	99.6	99.7	99.1	99.3
Q2	99.7	99.7	99.5	100.0	99.4	99.4	99.4	99.5	99.7	99.5
Q3	100.2	100.3	100.6	100.1	100.4	101.0	100.6	101.1	100.3	100.5
Q4	100.8	100.8	100.7	100.0	100.4	99.7	100.4	99.7	100.9	100.7
2014 Q1	101.6	101.6	101.8	100.0	99.6	99.7	99.7	99.9	101.6	101.5
Q2	102.2	102.5	102.7	100.3	100.0	99.9	100.3	100.5	102.5	102.6
Q3	102.6	102.8	103.1	100.2	101.0	100.3	101.4	100.7	102.8	103.0
Q4	103.0	103.0	103.6	100.0	101.3	100.9	101.8	101.2	103.0	103.4
2015 Q1	103.7	103.8	104.0	100.1	102.8	101.9	103.1	102.5	103.7	103.9
Q2	103.7	103.8	103.8	100.1	102.8	102.2	102.9	102.3	103.7	103.8
Q3	104.3	104.3	103.9	100.0	103.1	101.8	103.1	102.2	104.0	103.8
Q4	105.0	104.7	105.6	99.7	102.5	103.3	102.9	103.9	104.4	105.2
2016 Q1	105.1	104.8	105.6	99.7	103.0	102.6	102.8	103.1	104.5	105.3

Per cent change on quarter a year ago										
	DIW9	LNNO	LZVC		DJW8	DK3U	DJX3	DK44	DK2I	DK58
2012 Q2	0.7	0.7	2.2		1.1	1.2†	0.6	0.8†	0.6†	2.5
Q3	1.7†	1.4†	2.6†		2.8†	3.4	1.8	2.4	1.7	3.1
Q4	1.8	1.9	2.5		2.1	1.1	1.8	1.4	2.3	3.1†
2013 Q1	1.2	1.1	2.1		0.7	2.5	0.1†	1.7	1.5	2.6
Q2	1.0	0.9	1.7		−1.4	0.4	−1.5	0.1	1.5	2.2
Q3	1.1	1.3	1.8		−1.4	0.7	−0.9	1.0	1.8	2.0
Q4	1.3	1.3	1.7		−0.1	1.2	−0.3	0.7	1.6	1.6
2014 Q1	2.3	2.4	2.6		−0.2	−0.2	0.1	0.2	2.5	2.2
Q2	2.5	2.8	3.2		0.6	0.5	0.9	1.0	2.8	3.1
Q3	2.4	2.5	2.5		0.6	−0.7	0.8	−0.4	2.5	2.5
Q4	2.2	2.2	2.9		0.9	1.2	1.4	1.5	2.1	2.7
2015 Q1	2.1	2.2	2.2		3.2	2.2	3.4	2.6	2.1	2.4
Q2	1.5	1.3	1.1		2.8	2.3	2.6	1.8	1.2	1.2
Q3	1.7	1.5	0.8		2.1	1.5	1.7	1.5	1.2	0.8
Q4	1.9	1.7	1.9		1.2	2.4	1.1	2.7	1.4	1.7
2016 Q1	1.4	1.0	1.5		0.2	0.7	−0.3	0.6	0.8	1.3

Per cent change on previous quarter										
	DIW8	TXAJ	TXBU		DJW7	DK3T	DJX2	DK3Y	DK2H	DK57
2012 Q2	0.6†	0.7	0.6		1.7	1.5	1.4	1.4†	0.6†	0.6
Q3	0.4	0.2†	1.0†		1.0†	1.3	0.6†	0.7	0.3	1.1†
Q4	0.4	0.5	0.2		−1.3	−1.8†	−0.8	−1.1	0.8	0.6
2013 Q1	−0.2	−0.3	0.2		−0.7	1.4	−1.1	0.7	−0.2	0.2
Q2	0.4	0.5	0.3		−0.4	−0.5	−0.2	−0.2	0.6	0.2
Q3	0.5	0.6	1.1		1.0	1.6	1.2	1.6	0.6	1.0
Q4	0.6	0.5	0.1		−	−1.3	−0.2	−1.4	0.6	0.2
2014 Q1	0.8	0.8	1.1		−0.8	−	−0.7	0.2	0.7	0.8
Q2	0.6	0.9	0.9		0.4	0.2	0.6	0.6	0.9	1.1
Q3	0.4	0.3	0.4		1.0	0.4	1.1	0.2	0.3	0.4
Q4	0.4	0.2	0.5		0.3	0.6	0.4	0.5	0.2	0.4
2015 Q1	0.7	0.8	0.4		1.5	1.0	1.3	1.3	0.7	0.5
Q2	−	−	−0.2		−	0.3	−0.2	−0.2	−	−0.1
Q3	0.6	0.5	0.1		0.3	−0.4	0.2	−0.1	0.3	−
Q4	0.7	0.4	1.6		−0.6	1.5	−0.2	1.7	0.4	1.3
2016 Q1	0.1	0.1	−		0.5	−0.7	−0.1	−0.8	0.1	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
2011 Q4	−1.1	−0.1	−1.1	–	−1.1	−0.1	1.1	−0.5
2012 Q1	−0.9	0.2	−0.8	0.2	−0.9	0.2	1.4	−0.4
Q2	−0.4	0.1	−0.4	–	−0.3	0.1	0.2	0.2
Q3	0.6	0.4	0.7	0.5	0.5	0.3	−0.8	−0.2
Q4	0.8	0.1	0.8	0.1	0.8	0.2	−0.9	−0.6
2013 Q1	0.2	−0.4	0.1	−0.5	0.1	−0.5	0.1	0.7
Q2	−0.7	−0.8	−0.6	−0.7	−0.7	−0.7	1.5	1.5
Q3	−1.3	−0.2	−1.3	−0.2	−1.4	−0.4	1.8	0.2
Q4	−1.5	−0.1	−1.4	–	−1.4	0.2	3.3	0.9
2014 Q1	−0.5	0.6	−0.5	0.4	−0.6	0.3	1.7	−0.8
Q2	0.5	0.2	0.5	0.3	0.4	0.3	0.1	–
Q3	1.0	0.3	1.0	0.3	1.0	0.2	−0.7	−0.7
Q4	1.3	0.2	1.2	0.2	1.3	0.5	−1.8	−0.3
2015 Q1	0.4	−0.3	0.4	−0.4	0.6	−0.4	−1.1	−0.1
Q2	−0.2	−0.4	−0.2	−0.3	–	−0.3	−0.6	0.5
Q3	−0.5	–	−0.5	–	−0.5	−0.3	0.5	0.4
Q4	−0.7	–	−0.6	0.1	−0.7	0.3	0.2	−0.5

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
2011 Q4	0.1	0.4	–	0.5	−0.1	−0.4
2012 Q1	0.1	−0.1	0.1	−0.4	−0.1	0.2
Q2	–	−0.1	0.1	−0.1	0.1	–
Q3	−0.2	−0.4	–	−0.1	0.1	0.3
Q4	–	0.6	−0.1	0.4	0.2	−0.4
2013 Q1	−0.1	−0.2	−0.2	−0.5	0.2	0.2
Q2	0.3	0.3	0.2	0.4	−0.3	−0.4
Q3	0.2	−0.5	–	−0.3	–	0.6
Q4	0.2	0.6	0.3	0.7	−0.2	−0.6
2014 Q1	0.5	0.1	0.4	−0.4	−0.4	−0.1
Q2	0.1	−0.1	0.1	0.1	−0.1	−0.1
Q3	–	−0.6	−0.1	−0.4	−0.1	0.6
Q4	−0.2	0.4	−0.1	0.6	0.1	−0.4
2015 Q1	−0.1	0.1	−0.2	−0.5	0.1	–
Q2	−0.2	−0.2	−0.1	0.2	0.3	0.2
Q3	0.1	−0.2	–	−0.4	−0.2	0.1
Q4	–	0.3	−0.1	0.5	−0.1	−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
2011 Q4	−1.6	−0.1	−1.6	−0.1
2012 Q1	−1.4	–	−1.3	0.1
Q2	−0.5	0.3	−0.6	0.3
Q3	0.7	0.5	0.6	0.3
Q4	0.9	0.1	0.9	0.2
2013 Q1	0.2	−0.7	0.1	−0.7
Q2	−0.9	−0.8	−1.0	−0.8
Q3	−1.7	−0.3	−1.8	−0.5
Q4	−1.9	−0.1	−1.7	0.3
2014 Q1	−1.1	0.1	−1.1	−0.1
Q2	−0.2	0.1	−0.2	0.1
Q3	0.3	0.2	0.4	0.1
Q4	0.6	0.2	0.6	0.5
2015 Q1	0.1	−0.4	0.3	−0.4
Q2	−0.3	−0.3	−0.1	−0.3
Q3	−0.5	–	−0.5	−0.3
Q4	−0.7	–	−0.8	0.2