

Statistical bulletin

Labour productivity, UK: July to September 2015

Output per hour worked, per job and per worker for the whole economy and a range of industries, and changes in unit labour costs which is an indicator of inflationary pressures in the economy.



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1 April 2016 (provisional)

Correction

30 December 2015

A processing error has been found in the Labour Productivity, Q3 2015 release published at 09:30 on 23 December 2015. The error affects CDIDs A4YM, LNNN, A4YN, LNNP, A4YO and DMWR in Table 1 of the Reference Table LPROD01 and LNNL, LNNK, DMWN, DMWO and DMWL in Table 2.

The error affects the Q3 2015 estimates only and is no larger than 0.1 for any of the affected series.

ONS corrected Reference Table LPROD01 on 23 December 2015 at 15:00. The wording in the Statistical Bulletin and all other components were corrected on 30 December 2015.

ONS apologises for any inconvenience caused.

Table of contents

1. [Main points](#)
2. [About this release](#)
3. [Interpreting these statistics](#)
4. [General commentary](#)
5. [Whole economy labour productivity measures](#)
6. [Manufacturing labour productivity measures](#)
7. [Services labour productivity measures](#)
8. [Regional labour productivity measures](#)
9. [Revisions](#)
10. [Notes on sources](#)
11. [Background notes](#)

1 . Main points

- UK Labour Productivity as measured by output per hour grew by 0.5% from the second to the third calendar quarter of 2015 to the highest level ever recorded for this series, albeit still some 13% below an extrapolation based on its pre-downturn trend.
- By contrast, output per worker and output per job decreased by 0.2% and 0.1%, respectively, as a result of average hours decreasing in Q3.
- Output per hour in services grew strongly in Q3 to a record high, but manufacturing output per hour grew by only 0.1%, continuing the exceptionally weak trend for this series since the economic downturn.
- Whole economy unit labour costs were 2% higher in Q3 than the same quarter last year, as earnings and other labour costs have outpaced productivity. Unit wage costs in manufacturing grew by 4.6% over this period.
- This edition contains new estimates of regional labour productivity to 2014. These estimates show that productivity is above the UK average in London and the South East region, and well below the UK average in Wales and Northern Ireland.

2 . About this release

This release reports labour productivity estimates for the third quarter (July to September) of 2015 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 23 December 2015. Labour input measures are consistent with the latest [Labour Market Statistics](#) as described further in the 'General commentary' and 'Notes on sources' sections below.

3 . Interpreting these statistics

Whole economy output (measured by gross value added - GVA) increased by 0.4% in the third quarter of 2015, while the Labour Force Survey (LFS) shows that the number of workers and jobs increased by 0.6% and 0.5% respectively but hours worked decreased by 0.1% over this period. This combination of movements in outputs and labour inputs implies that labour productivity across the whole economy increased by 0.5% in terms of output per hour, but output per worker and output per job decreased by 0.2% and 0.1% respectively.

Differences between growth of output per worker and output per job reflect changes in the ratio of jobs to workers. This ratio decreased very slightly in Q3. Differences between these measures and output per hour reflect movements in average hours per job and per worker which, though typically not large from quarter to quarter, can be material over a period of time. For example, between Q2 and Q3 average hours per worker fell from 32.1 to 31.9 hours per week, partly reflecting faster growth of part-time employment than full-time employment. For this reason, output per hour 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 it 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 third quarter, whole economy output per hour grew by 0.5% and ULCs grew by 0.3%. Plugging these values into the ULC equation and re-arranging yields an implied increase of approximately 0.8% in labour costs per hour. This implied movement differs from other ONS information on labour remuneration such as [Average Weekly Earnings \(AWE\)](#) and [Indices of Labour Costs per Hour \(ILCH\)](#), partly because the labour cost component includes estimated remuneration of self-employed labour, which is not included in AWE and ILCH.

Following a review of 17 component industries within the Index of Services, we changed the status of these series from Experimental to Official Statistics in the Q2 2015 release. For further information, see '[Improvements to the output approach to measure UK GDP, 2015](#)' published on 30 September 2015. Accordingly, we have also changed the status of output per job and output per hour estimates that use these series as numerators. This means that none of the series in this release are Experimental Statistics.

4 . General commentary

Productivity estimates in this release are derived from estimates of 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).

Total hours worked fell in Q3 for the second consecutive quarter. This reflected a fall in average hours per job to the lowest level since Q4 2012; the number of workers and jobs both grew in Q3. The fall in average hours was fairly broad-based across services and the production industries.

On the other hand, output registered its 11 consecutive quarterly increase. Since Q4 2012 output has grown at an average annualised rate of 2.6%. Much of the growth in output is accounted for by services, and particularly non-financial, non-government services.

In consequence, whole economy output per hour was the highest ever recorded in Q3, albeit less than 1% higher than its pre-downturn peak in Q2 2008, and some 13% below an extrapolation based on the trend prior to the economic downturn. Output per hour in services was also the highest on record in the latest quarter, and about 3% above its pre-downturn level. By contrast, output per hour in the production industries was more than 6% below its pre-downturn level in Q3.

Prior to the economic downturn, productivity growth was slower in services (2.1% per annum) than production (3.5%) and manufacturing (4.0%). Productivity growth has slowed across the board since the downturn, but it has slowed much more in production and manufacturing than in services, such that this pattern has reversed. Output per hour in services has grown at an annualised average rate of 0.9% since the trough in output in Q2 2009. This is slightly ahead of the equivalent figure for manufacturing (0.8%) and well ahead of production (-0.4%). The disparity between manufacturing and production reflects a halving of productivity in mining and quarrying, although there have been some tentative signs of recovery in output and productivity in this industry in recent quarters.

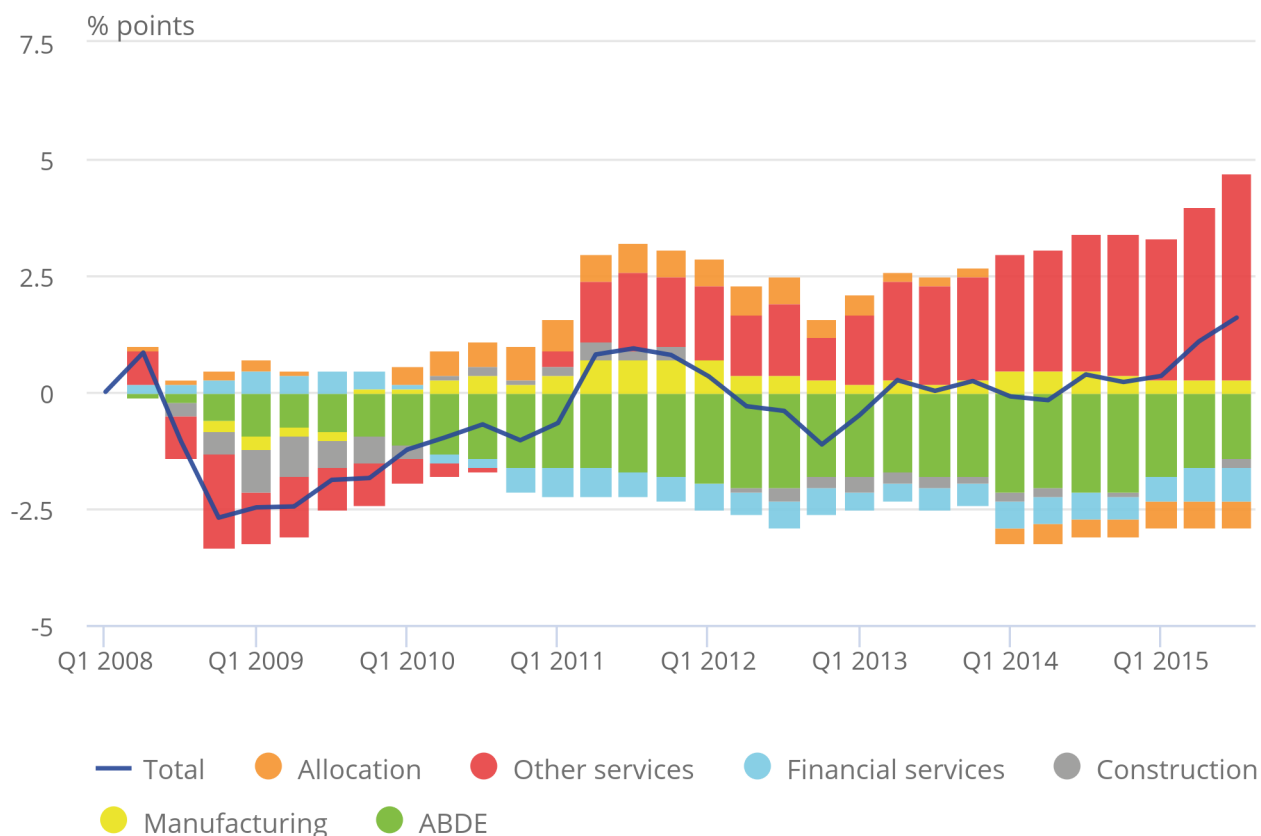
Some of the slowdown in productivity can be attributed to slower output growth, particularly in services. But this does not fully explain the change in ranking, not least because output growth in manufacturing has, if anything, been a little higher post downturn than over the pre-downturn period.

Another factor is a striking transformation in trends of labour inputs. Across the service industries, growth of hours worked has been fairly similar, on average, over the post- and pre-downturn periods. Hence the slowdown in productivity growth in services mainly reflects the slower output growth noted above. This has been focussed in a few service industries, especially financial services.

By contrast, hours worked in manufacturing have gone from a long term trend decline of around 3.5% per annum prior to the economic downturn to positive growth since 2009, albeit still below the whole economy average (so the manufacturing sector has continued to shrink as a share of total hours). In manufacturing, therefore, the collapse in productivity growth primarily reflects unprecedented growth of labour inputs.

Figure 1: Cumulative contributions to quarter on quarter growth of whole economy output per hour

Figure 1: Cumulative contributions to quarter on quarter growth of whole economy output per hour



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 provides a high level summary of movements in output per hour since Q1 2008 in terms of cumulative quarterly changes. Whole economy output per hour fell sharply in 2008 before staging a recovery up to mid 2011. Productivity then fell again through the second half of 2011 and through 2012, initially reflecting sluggish output growth and then reflecting strong growth in hours worked. Output per hour has grown by about 2.7 percentage points since Q4 2012, albeit with a period of broadly flat productivity between Q2 2013 and Q4 2014.

Over the period since Q1 2008, movements in whole economy output per hour have been dominated by positive contributions from 'Other services' (that is, excluding financial services) and negative contributions from industries ABDE (non-manufacturing production and agriculture). Focussing on the period since Q4 2012, the net contribution of ABDE has been to add 0.4 percentage points to overall productivity. The contribution of 'Other services' has added about 3.5 percentage points over this period, while the combined contributions of the remaining industries has been close to zero. Additionally there has been a negative contribution of about 1 percentage point due to shifts in resources from relatively high productivity industries to industries with lower productivity. (There is some non-additivity in contributions over this period because GVA weights are fixed from 2012).

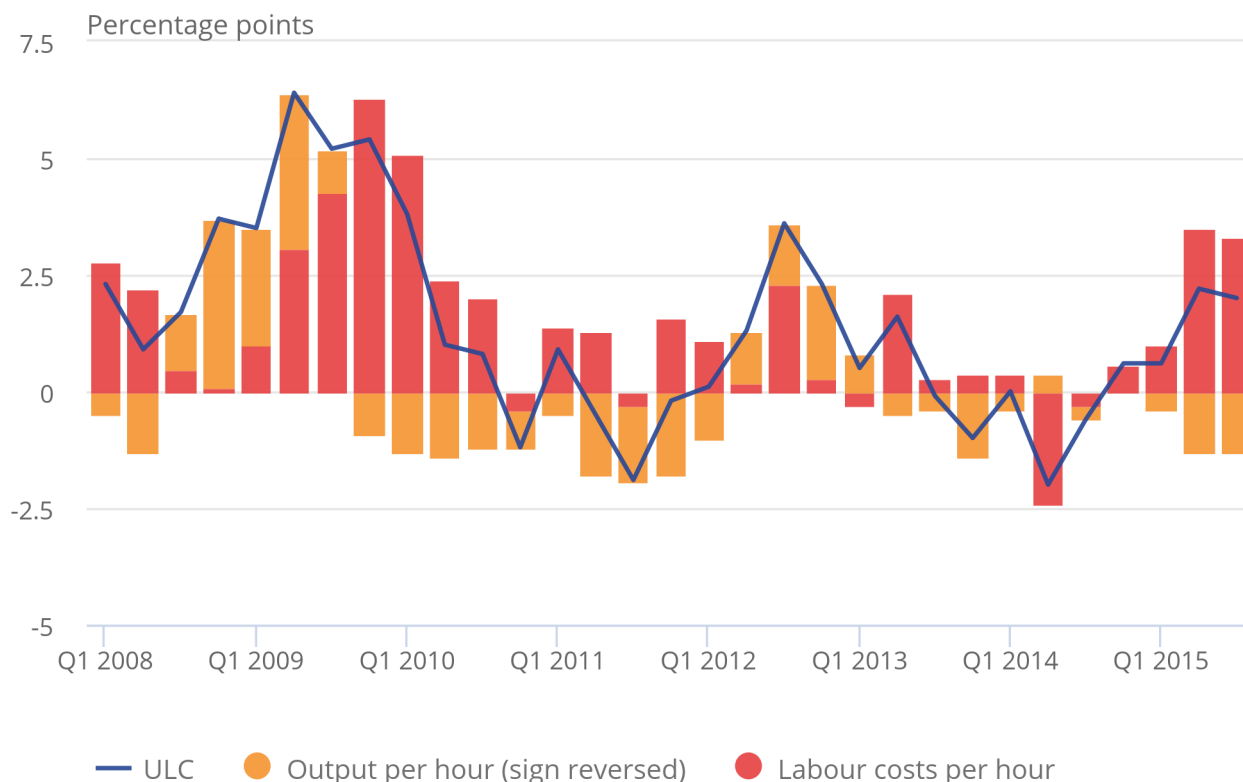
In this case, the negative allocation effect partly represents the impact of lower oil prices, which reduces the value of output of ABDE relative to other industries, and partly reflects a reduction in the share of manufacturing in total output.

Figure 2: 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 3 (July to Sept) 2015

Figure 2: 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 3 (July to Sept) 2015



Source: Office for National Statistics

Notes:

1. Labour costs per hour estimates will differ from those in the ONS bulletin Index of Labour Costs per Hour due to differences in methodology.

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.

Downward contributions to ULC growth from generally positive productivity growth since the end of 2012 were initially accompanied by low or negative contributions from growth in labour costs per hour, allowing ULC growth to fall to -2.0% in Q2 2014. Since then, however, growth of labour costs per hour has accelerated, reaching 3.3% in Q3. This upward trend is also apparent in the [Index of Labour Costs per Hour](#), which shows labour costs per hour excluding bonuses and arrears growing 3.5% in the year to Q3, and also, though to a lesser extent, in average weekly earnings growth.

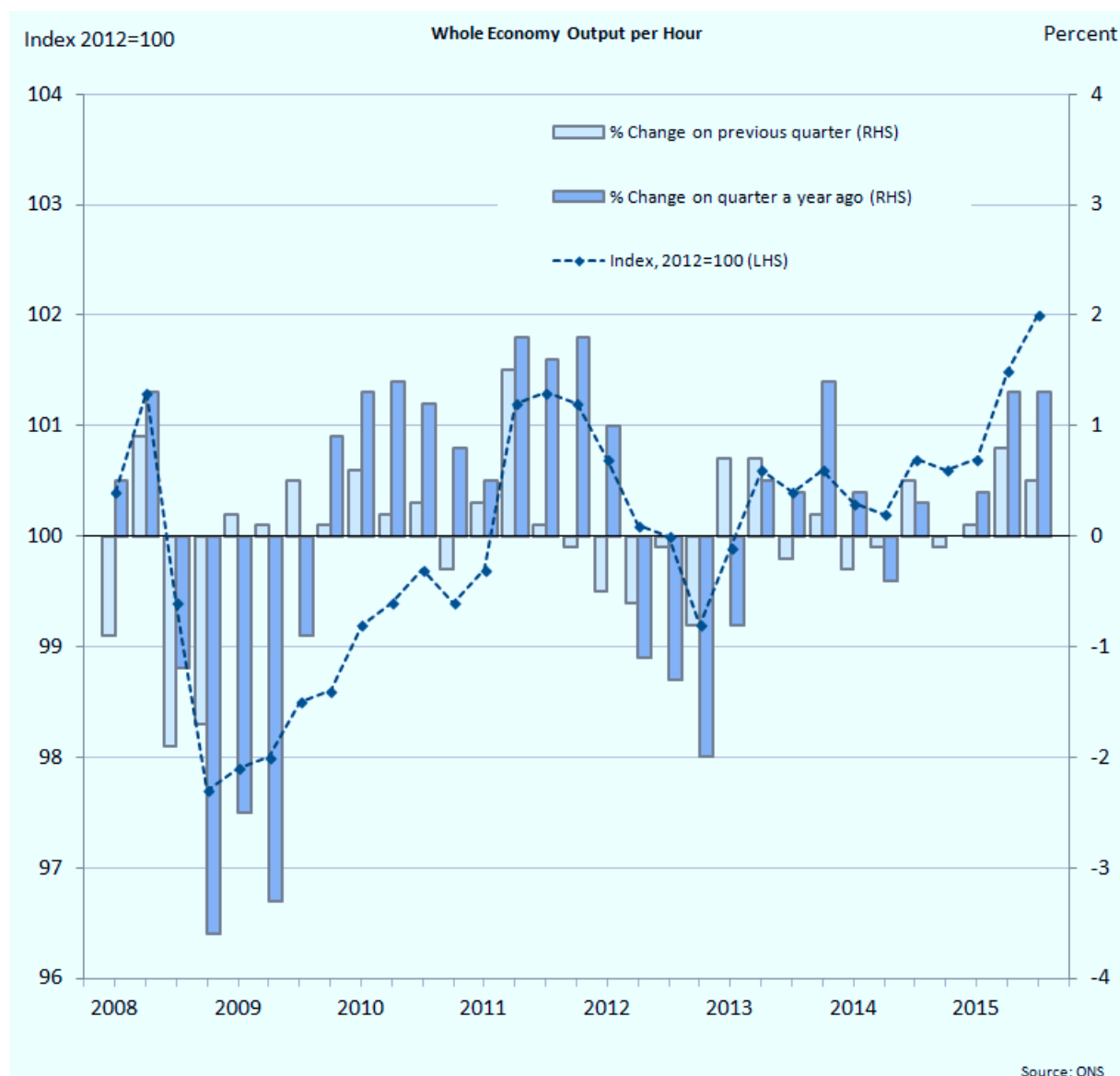
Analysis of ULC growth by industry (available in [Reference Table LPRODSULC \(266.5 Kb Excel sheet\)](#)) shows ULC growth across the service sector of around 2% pa over the last two quarters, with wide variation between service industries. These experimental statistics show similar rates of ULC growth for the market sector and for the production industries, where falling ULCs in non-manufacturing production are offsetting above-average ULC growth in manufacturing.

5 . Whole economy labour productivity measures

Output per hour continued on an upward trend that began in late 2012. This measure grew in quarter 3, 2015 by 1.3% on the same quarter a year ago, the same as Q2 2015, and on the quarter it saw a rise of 0.5% (see Figure 3).

Figure 3: Whole economy output per hour

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 3 (July to Sept) 2015



Output per hour growth in the latest quarter was driven by a 0.4% increase in GVA, aided by a slight fall in hours. Figure 4 shows that hours worked grew slightly faster than jobs from the start of 2011, suggesting that average hours per job has increased, but more recently this trend has reversed.

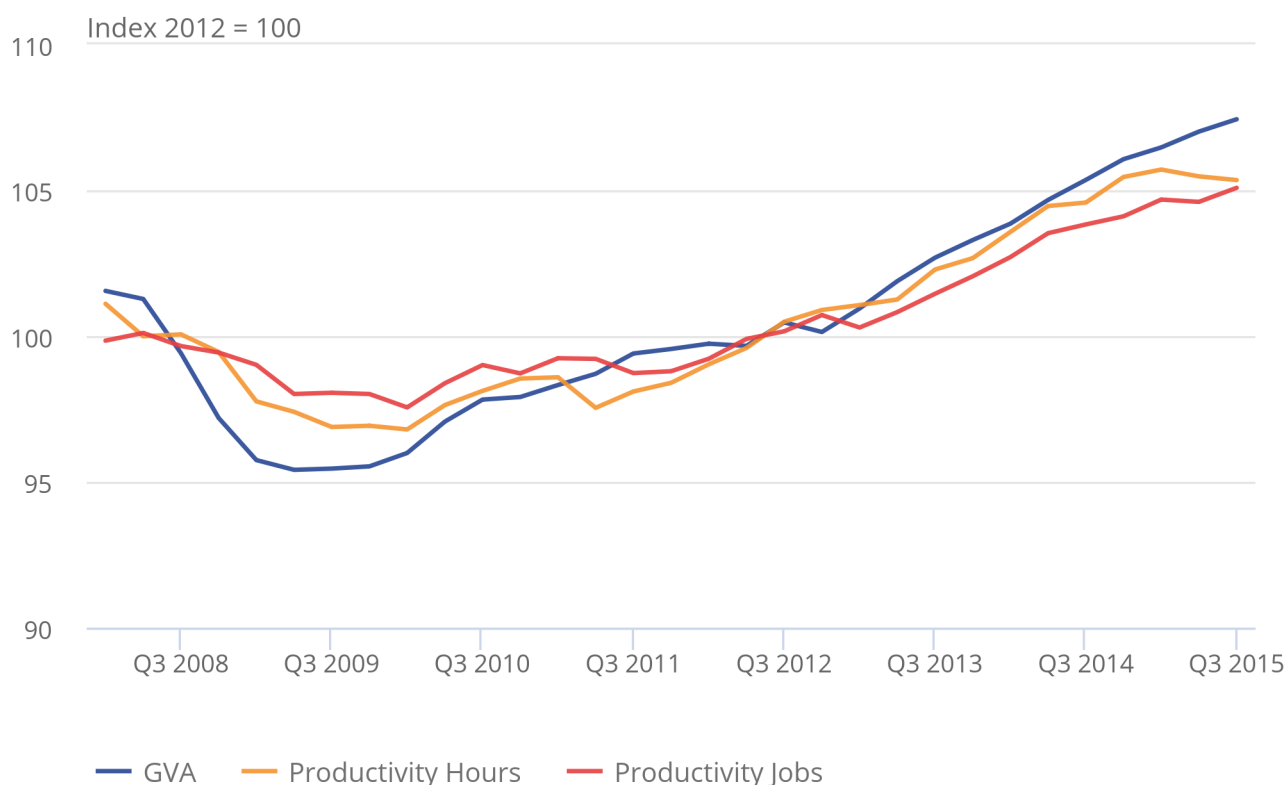
The flattening of hours relative to GVA and jobs has led to a faster increase in output per hour as opposed to output per job. In the past year, hours have grown by 0.7%, versus 1.3% for jobs. GVA growth of 2% over the same period has led to the productivity increase of 1.3% and 0.7% in output per hour and output per job, respectively.

Figure 4: Components of productivity measures

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 3 (Jul to Sep) 2015

Figure 4: Components of productivity measures

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 3 (Jul to Sep) 2015

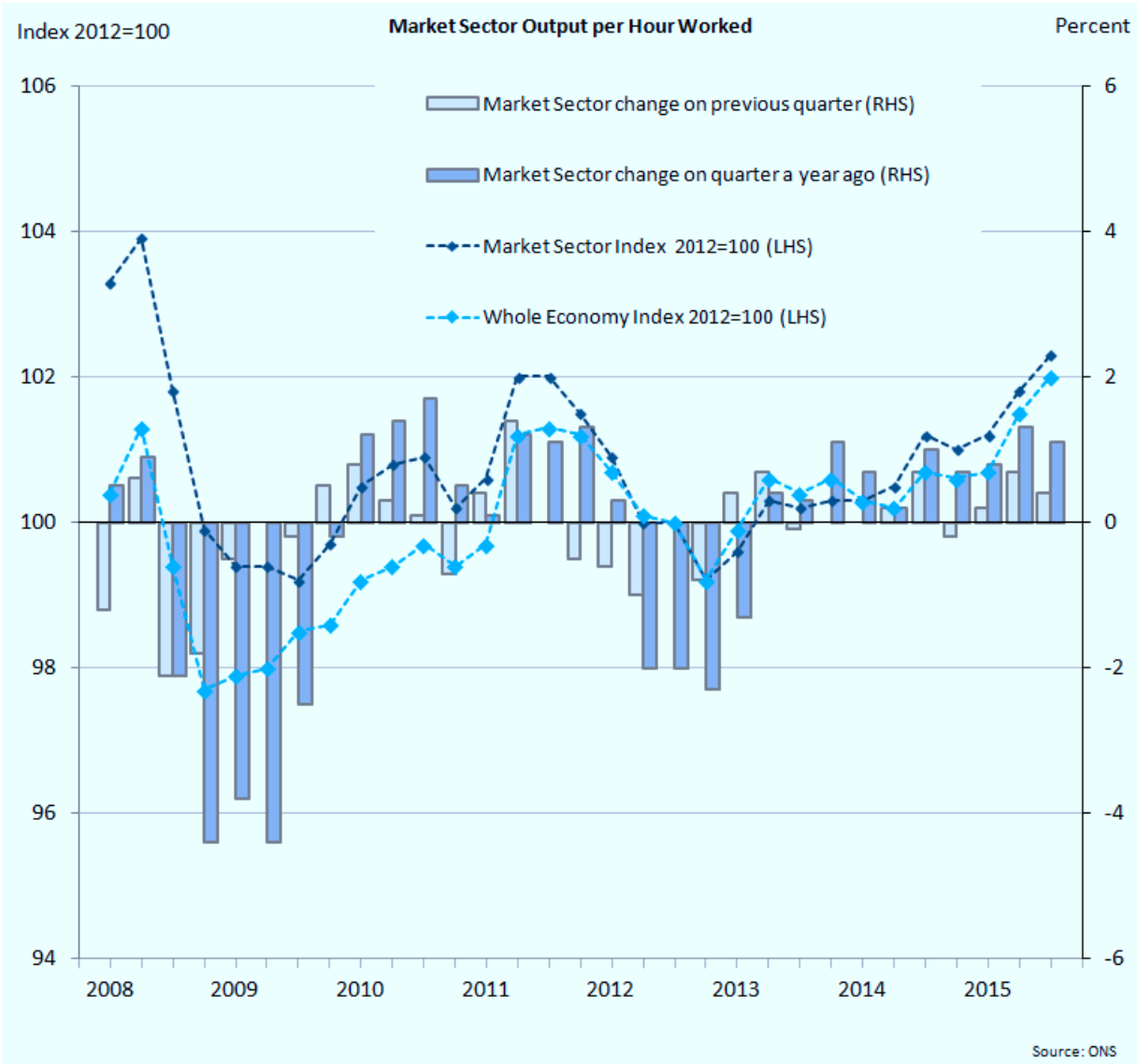


Source: Office for National Statistics

In general terms, Market Sector output per hour growth continues to track that of the whole economy after the two measures converged following the financial crisis (see Figure 5).

Figure 5: Market Sector Output per Hour Worked

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 3 (Jul to Sep) 2015



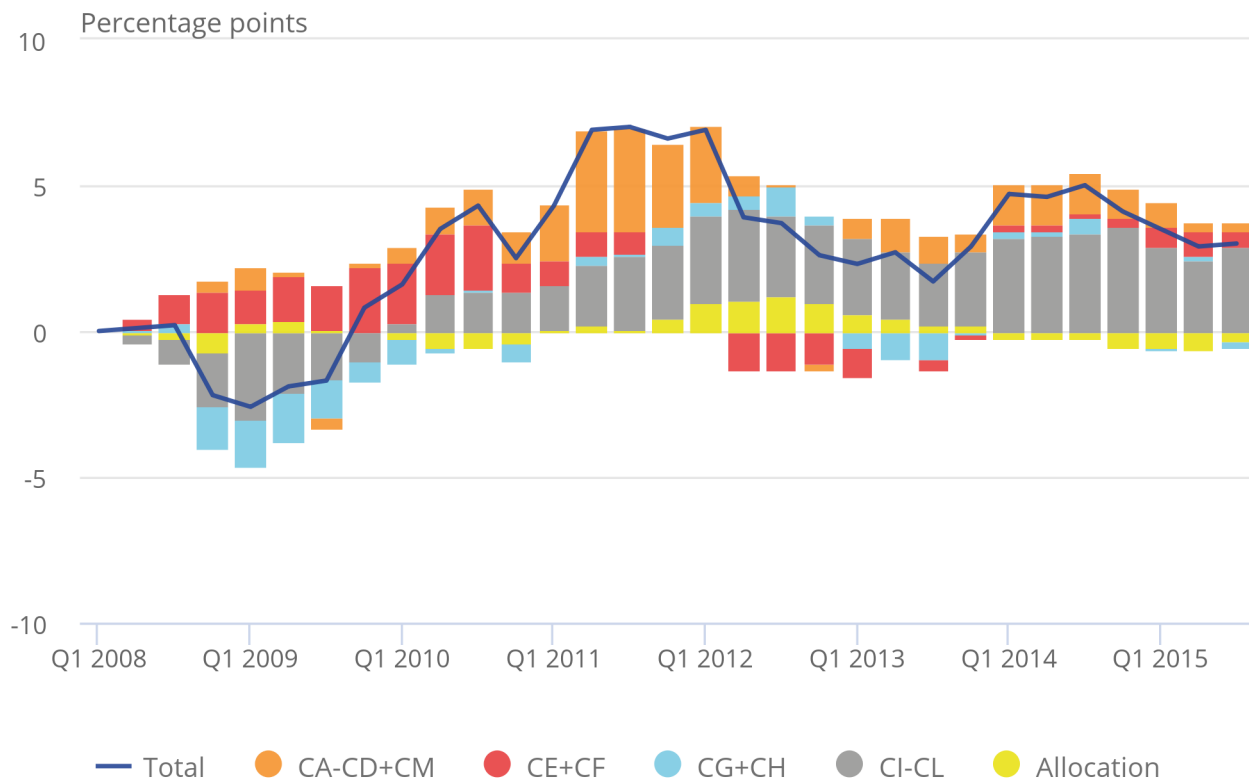
6 . Manufacturing labour productivity measures

Figure 6: Cumulative contributions to quarter on quarter growth of manufacturing output per hour

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 3(Jul to Sep) 2015

Figure 6: Cumulative contributions to quarter on quarter growth of manufacturing output per hour

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 3(Jul to Sep) 2015



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).

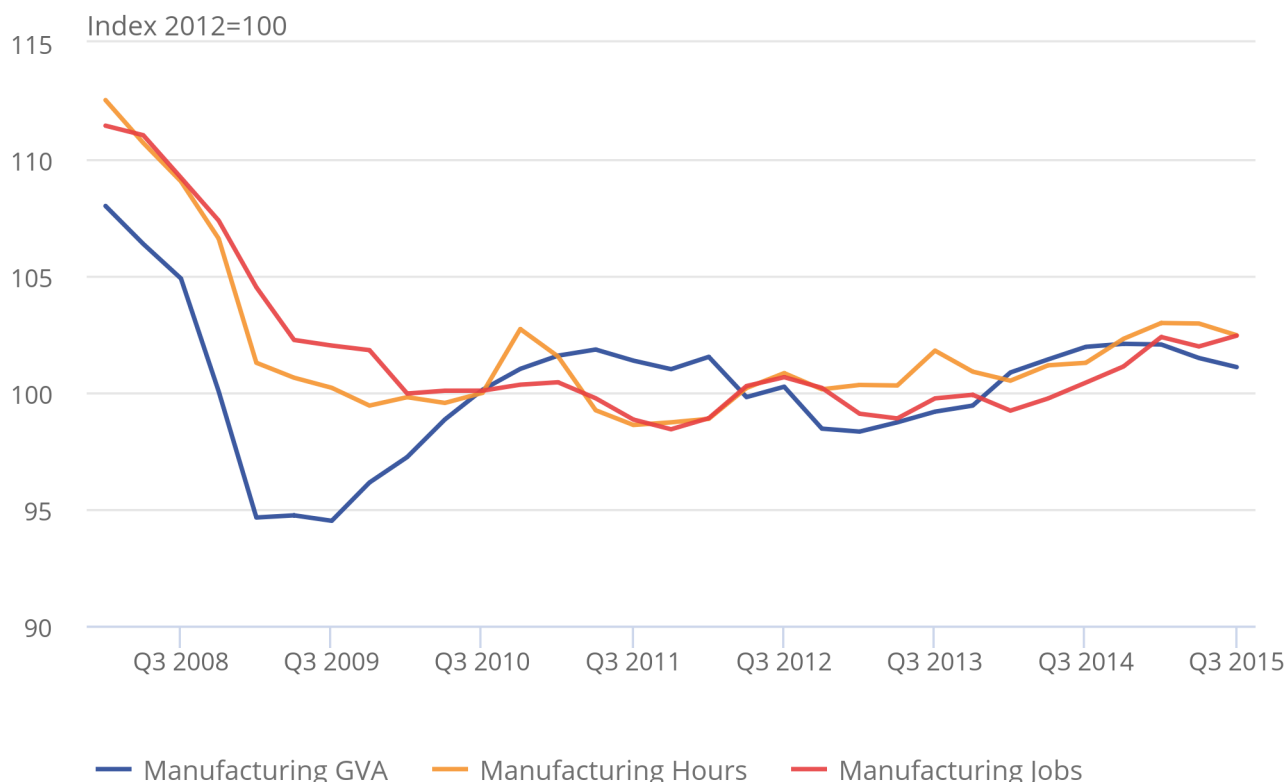
Figure 6 shows output per hour in manufacturing in terms of cumulative quarterly annual changes and decomposed into broad component industries. Here the allocation element captures the effect of changes in output shares and relative prices within manufacturing, and has knocked about 1.5 percentage points off manufacturing productivity since Q1 2012. This primarily reflects relative price movements such as the effect of falling oil prices on chemical prices. Falling productivity in industries CA-CD+CM has knocked another 2.3 percentage points off manufacturing output per hour since Q1 2012, but has shown little overall change in contribution to output per hour since Q1 2008.

Figure 7: Components of manufacturing productivity measures

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 3 (Jul to Sep) 2015

Figure 7: Components of manufacturing productivity measures

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 3 (Jul to Sep) 2015



Source: Office for National Statistics

Manufacturing GVA, jobs and hours have all fluctuated within a narrow range since 2010. Since Q3 2014, manufacturing GVA fell by 0.9% and hours increased by 1.1%, which explains the weakening productivity performance of manufacturing since this time last year.

More information on the labour productivity of sub-divisions of manufacturing is available in Reference Table [LPROD01 \(358.5 Kb Excel sheet\)](#) (Tables 3 and 4), 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.

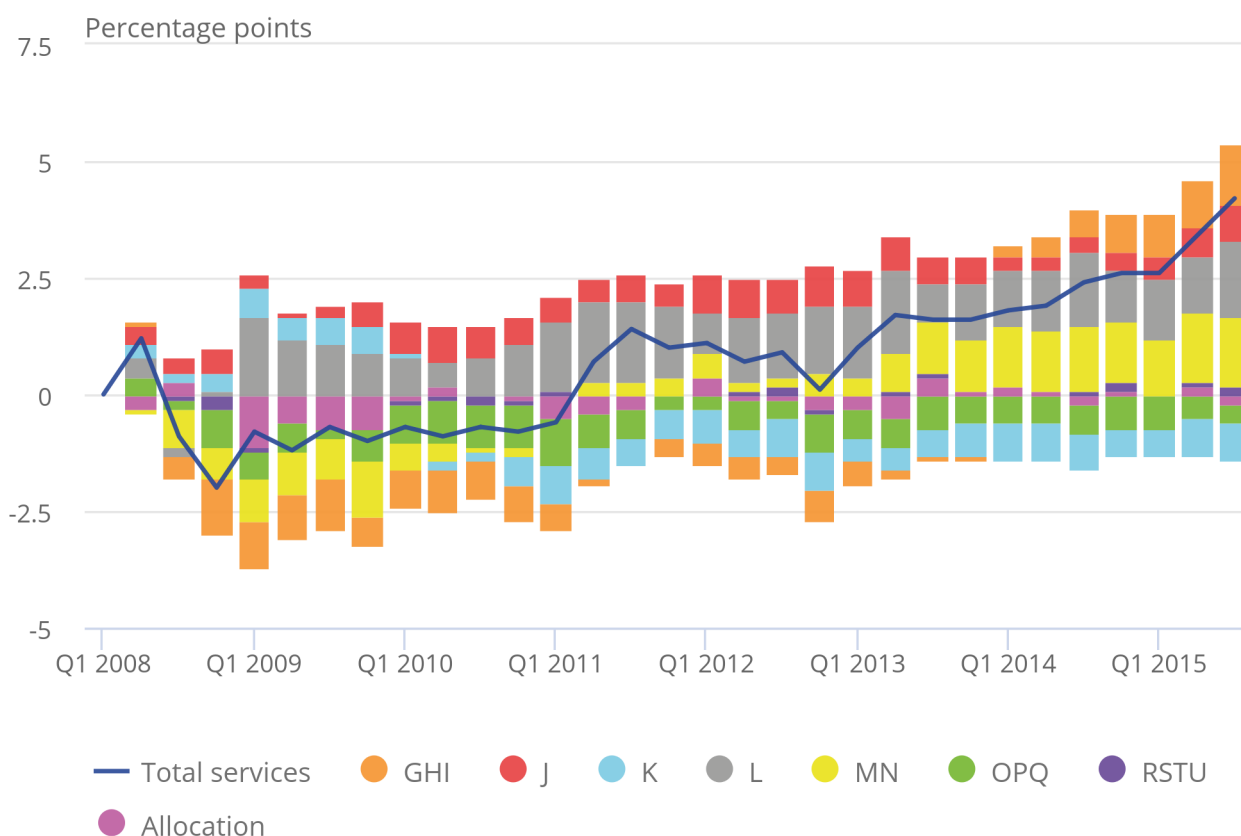
Tables 3 and 4 include annual estimates for the level of productivity in current price terms for the National Accounts base year of 2012. These are estimates of GVA per unit of labour input and are not necessarily related to pay rates. Output per job (Table 3) varied from approximately £44,100 in Textiles wearing apparel and leather (divisions 13-15) to £135,900 in Chemicals and pharmaceuticals (divisions 20-21). The average for the whole of manufacturing was £59,700 and the average for the whole economy was £48,200 in 2012.

Chemicals and pharmaceuticals were also top of the distribution for output per hour in 2012 (£73.2 per hour), with Basic metals and metal products (divisions 24-25) at the bottom of the distribution (£25.0). On this basis the average for manufacturing as a whole was £32.3 and the average for the whole economy was £30.2 per hour.

7 . Services labour productivity measures

Figure 8: Cumulative contributions to quarter on quarter growth of services output per hour

Figure 8: Cumulative contributions to quarter on quarter growth of services output per hour



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.

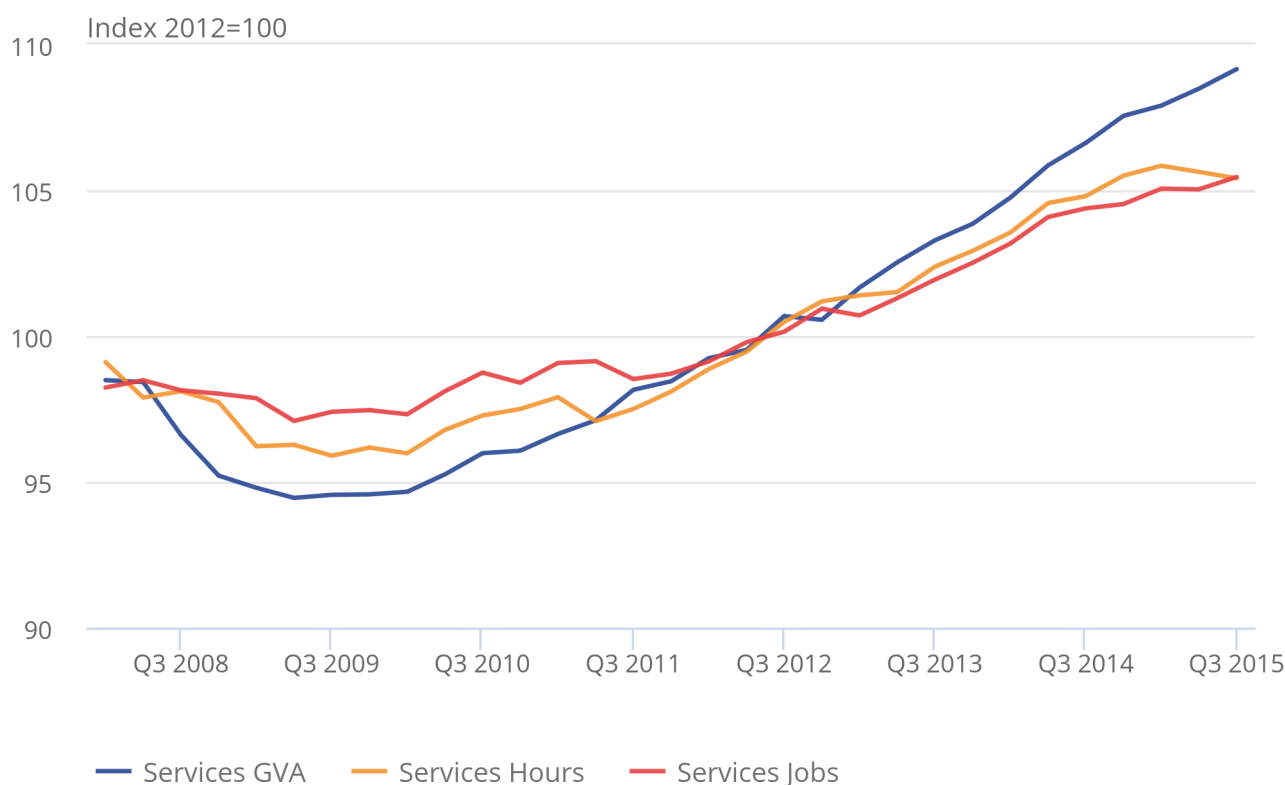
Figure 8 deconstructs the growth of output per hour in total services (G-U) since Q1 2008 into the cumulative contributions from different service industries. It suggests that much of the recent strengthening of output per hour in services has been driven by a partial recovery in transport and storage services and in retail, reflected in GHI, as well as stronger contributions from MN. The Real Estate industry (L) also stands out because its contributions to total services output per hour have been positive nearly every quarter since Q1 2008. However, Real Estate productivity 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. As such, users should approach productivity estimates for the industry L with some caution. From Q1 2014 K and OPQ have had a negative impact on output per hour. Figure 8 also shows in the most recent quarter a negative allocation which captures either the impact of resources flowing from higher to lower productivity industries or movements in relative prices.

Figure 9: Components of Services Productivity Measures

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 3(Jul to Sep) 2015

Figure 9: Components of Services Productivity Measures

Seasonally adjusted, UK, quarter 1 (Jan to Mar) 2008 to quarter 3(Jul to Sep) 2015



Source: Office for National Statistics

Overall, output per hour in services is now on a steady upward trend after a couple of periods of moving sideways between Q1 2009 and Q1 2011, then again Q3 2011 and Q2 2012.

Services output and hours have both risen since late 2012 (see Figure 9), although more recent data for hours and jobs are less robust. 2015 has demonstrated a mild reduction in productivity hours after reaching a peak in Q1 2015. Coupled with positive GVA estimates, this has driven the rise in output per hour for services in Q3.

More information on labour productivity of services industries is available in Tables 5 and 6 of Reference Table [PROD01 \(358.5 Kb Excel sheet\)](#) and in the tables at the end of the PDF version of this statistical bulletin.

Excluding industry L, output per job in 2012 varied from approximately £20,900 in Accommodation and food services (section I) to £100,300 in Finance and insurance (section K). These industries were also at the bottom and top of the productivity distribution in terms of output per hour (Table 6).

8 . Regional labour productivity measures

This section uses regional estimates of nominal GVA (NGVA) up to 2014, consistent with the ONS [regional GVA release](#) on 9 December 2015. The estimates in Table 9 of Reference Table [PROD01 \(358.5 Kb Excel sheet\)](#) and in the tables at the end of the PDF version of this statistical bulletin indicate the relative value of economic output per job and per hour across the NUTS1 regions, indexed to the UK=100. In interpreting these statistics it should be borne in mind that they do not take account of price differences across regions (e.g. in housing costs) and should not therefore be interpreted as measures of relative living standards.

There are revisions to regional GVA, jobs and hours worked compared with the previous estimates published on 24 December 2014. However, the overall pattern of regional productivity is broadly unchanged from previous estimates.

Figure 10 shows that, of the NUTS1 regions, only in London and the South East is NGVA per job above the UK average, although this is sufficient for England as a whole to be fractionally above average. NGVA per job was close to the UK average in 2014 in the East of England and in Scotland. In all other regions, NGVA per job was below than the UK average.

A broadly similar pattern obtains for NGVA per hour (Figure 11), although the margin by which London exceeds the UK average is significantly smaller, and Wales and Northern Ireland exchange places at the bottom of the productivity distribution.

Differences between Figures 10 and 11 reflect differences in average hours worked across the regions. In 2014, average hours worked in London were more than 6% above the UK average, and more than 5% above average hours worked in the next highest region (West Midlands). Average hours worked were lowest in Wales, around 3% below the UK average in 2014.

Regional productivity differentials have been fairly stable over time, although there is some faint evidence that London's productivity advantage is narrowing a little, and that productivity in Scotland is closing in on the UK average.

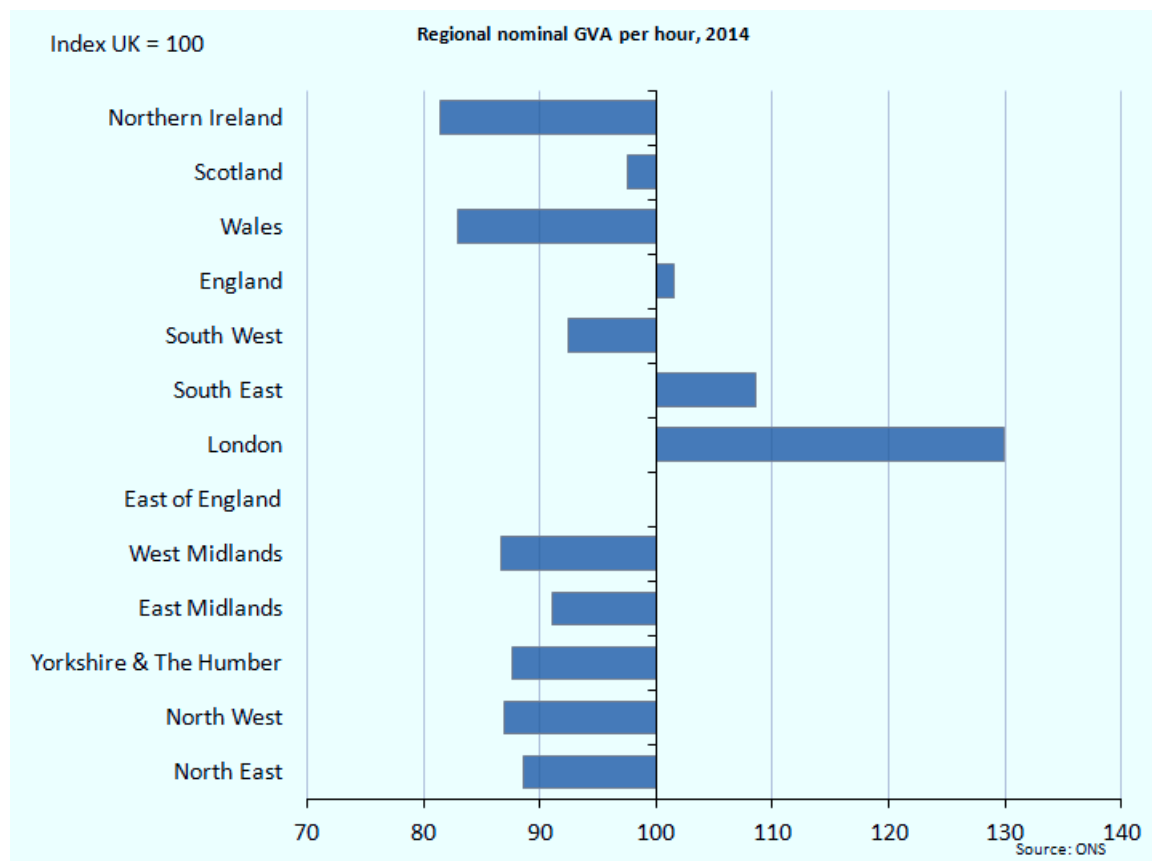
Figure 10: Regional nominal GVA per Job, 2014

United Kingdom: NUTS1 regions



Figure 11: Regional nominal GVA per hour, 2014

United Kingdom: NUTS1 regions



9 . Revisions

There are revisions to both the numerator and the denominator for Labour Productivity estimates.

Growth rate revisions to the main productivity variables reflect, in part, a labour market benchmarking exercise. Workforce Jobs (WFJ) data, components of which are used to determine industry splits for productivity jobs estimates, were benchmarked to the annual Business Register and Employment Survey, as detailed in this [revisions article \(260.6 Kb Pdf\)](#). Productivity hours estimates, which are the product of jobs and average hours by industry, are also affected by the changes.

While whole economy estimates for both productivity jobs and productivity hours remain unchanged, the benchmarking changes have affected different industries in different ways from Q4 2008.

Industries that have seen an overall increase in labour input include mining and quarrying, manufacturing, construction, information and communications, and financial services. The increase in labour input has acted as a drag on productivity estimates for these industries.

Industries that saw an overall decrease in labour input, and thus a relative boost to their productivity estimates, include agriculture, utilities, transportation and storage, and other services.

The aggregate effect has resulted in relatively large upward revisions to manufacturing labour input and thus downward revisions to productivity estimates. The impact on services is much smaller.

Revisions on the output side were slightly negative since Q1 2014. Details of these revisions are available from the [Quarterly National Accounts](#) release. Financial services saw relatively large downward revisions due to benchmarking of insurance industry GVA to regulatory data and imputed data for banking GVA being replaced by real data.

Changes to unit labour cost growth rates also reflect revisions to mixed income estimates. These changes are due to revised estimates of Average Weekly Earnings (AWE - a component of mixed income) for employers with less than 20 staff, leading to re-evaluation of income against comparable labour market estimates. Details of the AWE revisions are available on the [Labour Markets webpage](#).

The effect has increased mixed income estimates since Q1 2014, while Gross Operating Surplus estimates for the same period have fallen, largely due to the financial services revisions noted above.

Table A below summarises differences between first published estimates for each of the statistics in the first column with the estimates for the same statistics published three years later. This summary is based on five years of data, that is, for first estimates of quarters between Q4 2007 and Q3 2012, which is the last quarter for which a three-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 (Q3 2015) shown in the second column. Additional information on revisions to these and other statistics published in this release is available in the [Revisions Triangles \(3.42 Mb Excel sheet\)](#) component of this release.

Table A: Revisions analysis

Whole economy

Change on quarter a year ago	Value in latest period (%)	Average over 5 years (bias)	Average over 5 years without regard to sign (average absolute revision)
Output per worker	0.6	0.2	1.0
Output per job	0.7	0.0	0.0
Output per hour	1.3	0.1	0.8
Unit labour costs	2.0	-0.3	1.2
Unit wage costs	2.7	-0.6	1.2

Source: Office for National Statistics

Notes:

1. Revisions between first publication and estimates five years later (Relating to Period - Q4 2007 - Q3 2015).

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. Were the average revisions to apply to the current release, growth of output per hour in the year to the third quarter of 2015 would be revised from 1.3% to 1.4% over the next three years. Growth of unit labour costs would be revised from 2.0% to 1.7%, while growth of unit wage costs would be revised from 2.7% to 2.1% over the same period.

A research note, '[sources of revisions to labour productivity estimates \(145.4 Kb Pdf\)](#)' is available on the ONS website.

10 . 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 Statistics 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. This is explained further below
- productivity jobs are scaled so industries sum to total 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 ONS 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.

What is a reporting unit?

The term 'enterprise' is used by ONS to describe the structure of a company. Individual workplaces are known as 'local units' and a group of local units under common ownership is called the 'enterprise'. In ONS business surveys, reporting units are the parts of enterprises that return data to ONS. While the majority of reporting units and enterprises are the same, larger enterprises have been split into reporting units to make the reporting easier.

For most business surveys run by ONS, forms are sent to the reporting unit rather than local units, in other words, to the head office rather than individual workplaces. This enables ONS to gather information on a greater proportion of total business activity than would be possible by sending forms to a selection of local units. But it has the disadvantage that it is difficult to make regional estimates – for instance all the employment of, say, a chain of shops would be reported as being concentrated at the site of the head office.

Further differences between reporting unit and local unit data can be seen in the industry coding. Take, for example, a reporting unit with three cake shops and one bakery, each employing five people. The local unit analysis would put 15 employees in the retail industry and five employees in the manufacturing industry. But the reporting unit series puts all 20 people into the industry with the majority activity, in this case, retailing. Detailed industry figures compiled using the local unit approach will therefore be different from industry figures using the reporting unit approach, although the totals will be the same at the whole economy level.

11. Background notes

1. This statistical bulletin

This statistical bulletin presents Labour Productivity estimates for the UK. More detail can be found on the [Productivity Measures Topic page](#) on the ONS website.

Index numbers are referenced to 2012=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.

2. Quality and methodology

A revised and updated [Quality and Methodology Information paper \(649 Kb Pdf\)](#) for Labour Productivity was published in March 2012. This paper 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

3. Future developments

As outlined in '[Economics at the ONS: Increasing Openness, Improving Capability](#)' (340.2 Kb Pdf), early next year the ONS will publish the Economic Statistics and Analysis Strategy for consultation. This will articulate the department's research priorities and it will include details of several key strands that make up a prospective productivity work programme:

- understanding the Causes of the Productivity Slowdown – creating a standardised framework for the analysis of the reasons for the slow-down in growth, and analysis at the UK micro-data and international levels to identify the key causal drivers of the UK's performance
- improving Input Measurement – ensuring the input measures used in the denominator of the productivity equation have been correctly measured, particularly in relation to the inclusion of intangibles and 'missing capitals'
- improving Output Measurement – ensuring the output measures used in the numerator of the productivity equation have been correctly measured through incorporating the latest changes and improvements in the National Accounts

This will build on the previous productivity work plan, [Productivity measures and analysis: ONS work plan \(155.2 Kb Pdf\)](#), published in February 2015.

The programme will also include key steps aimed at improving the measurement of Public Sector Productivity, with an aim to produce quarterly estimates. To that end, the ONS are assessing the benefits of publishing a single quarterly Productivity Bulletin that will include labour productivity, public sector productivity measures and other productivity statistics.

We welcome users' views on these developments and feedback can be sent to productivity@ons.gsi.gov.uk. These issues will also be discussed at the forthcoming user group event detailed in point 5 below.

4. Other data on productivity

ONS has published [Labour Productivity Measures from the ABS, 2008-2012](#). This article uses published estimates from the Annual Business Survey (ABS) to provide more detailed information on recent trends in labour productivity by industry than those available from other sources.

ONS publishes [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](#).

ONS publishes 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.

ONS also publishes [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, ONS publishes a range of [Public sector productivity](#) measures and related articles. These measures define productivity differently from that used in the ONS labour productivity and MFP estimates. Further information can be found in [Phelps \(2010\) \(252.5 Kb Pdf\)](#) and in an ONS [Information Note \(433.2 Kb Pdf\)](#) published on 4 June 2015.

More information on the range of ONS productivity estimates can be found in the [ONS Productivity Handbook](#).

5. User engagement

ONS will host a half-day workshop for users of productivity statistics in London on 3 February 2016. Users wishing to attend the event should register by emailing Productivity@ons.gsi.gov.uk.

Presentation slides and other materials on the previous workshop in February 2015 are available from our [website](#).

You can follow ONS on [Twitter](#) and [Facebook](#).

6. Publication policy

Details of the policy governing the release of new data are available from the [UK Statistics Authority](#) or from the Media Relations Office email: media.relations@ons.gsi.gov.uk.

A list of the names of those given [pre-publication access](#) to the contents of this bulletin is also available.

7. Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk

1 Labour productivity key measures

United Kingdom

Seasonally adjusted (2012=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
2011	100.1	100.0	100.9	104.1	103.7	102.1	101.9	98.7	100.0
2012	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2013	101.0	101.0	100.4	99.7	98.0 [†]	99.5 [†]	98.1 [†]	101.2	100.8
2014	101.5 [†]	101.4 [†]	100.5 [†]	100.6 [†]	99.3	101.5	100.3	102.1 [†]	101.5 [†]
2011 Q4	100.8	100.8	101.2	104.1	103.3 [†]	102.6	102.3	99.7	100.4
2012 Q1	100.5	100.5	100.7	102.8	102.8	102.6	102.7	100.1	100.4
Q2	99.8	99.8	100.1	99.9	100.1	99.5	99.6	99.7	100.1 [†]
Q3	100.3	100.3	100.0	99.4	99.0	99.6	99.4	100.5	100.2
Q4	99.4	99.4	99.2	98.0	98.2	98.2 [†]	98.3	99.6	99.4
2013 Q1	100.4	100.6	99.9	99.0	97.5	99.2	98.0 [†]	100.9 [†]	100.3
Q2	101.1	101.1	100.6	100.1	98.5	99.8	98.4	101.2	101.0
Q3	101.3	101.2	100.4	99.9	97.5	99.4	97.4	101.3	100.9
Q4	101.3	101.2	100.6	99.7 [†]	98.6	99.5	98.5	101.3	100.9
2014 Q1	101.0	101.1 [†]	100.3	101.0	99.5	101.6	100.3	101.5	101.2
Q2	101.3 [†]	101.1	100.2 [†]	101.0	99.5	101.7	100.2	101.7	101.2
Q3	101.6	101.5	100.7	100.5	99.5	101.5	100.7	102.2	101.7
Q4	101.9	101.9	100.6	100.0	98.5	101.0	99.8	102.9	101.9
2015 Q1	101.6	101.7	100.7	99.0	98.4	99.7	99.1	102.7	101.9
Q2	102.4	102.3	101.5	99.9	98.7	99.5	98.6	103.3	102.7
Q3	102.3	102.3	102.0	99.5	99.7	98.7	98.7	103.5	103.5
Per cent change on quarter a year ago	A4YN	LNNP	LZVD	DJ4O	DJK5	DJ4R _t	DJK8	DJE5	DJQ3
2011 Q4	1.6	1.6	1.8	-1.1	0.2	1.9 [†]	4.1	2.2	1.9
2012 Q1	1.3	1.4	1.0	-1.2	-0.2	1.5	2.7	2.7	1.7
Q2	0.3	0.3	-1.1	-3.7	-3.9	-2.5	-2.9	1.7	0.1 [†]
Q3	-0.5	-0.4	-1.3	-4.8	-5.2	-2.8	-3.3	0.9	-0.5
Q4	-1.4	-1.4	-2.0	-5.9	-4.9	-4.3	-3.9	-0.1	-1.0
2013 Q1	-0.1	0.1	-0.8	-3.7	-5.2	-3.3	-4.6 [†]	0.8 [†]	-0.1
Q2	1.3	1.3	0.5	0.2	-1.6	0.3	-1.2	1.5	0.9
Q3	1.0	0.9	0.4	0.5	-1.5	-0.2	-2.0	0.8	0.7
Q4	1.9	1.8	1.4	1.7 [†]	0.4 [†]	1.3	0.2	1.7	1.5
2014 Q1	0.6	0.5 [†]	0.4	2.0	2.1	2.4	2.3	0.6	0.9
Q2	0.2 [†]	-	-0.4 [†]	0.9	1.0	1.9	1.8	0.5	0.2
Q3	0.3	0.3	0.3	0.6	2.1	2.1	3.4	0.9	0.8
Q4	0.6	0.7	-	0.3	-0.1	1.5	1.3	1.6	1.0
2015 Q1	0.6	0.6	0.4	-2.0	-1.1	-1.9	-1.2	1.2	0.7
Q2	1.1	1.2	1.3	-1.1	-0.8	-2.2	-1.6	1.6	1.5
Q3	0.7	0.8	1.3	-1.0	0.2	-2.8	-2.0	1.3	1.8
Per cent change on previous quarter	A4YO	DMWR	TXBB	DJ4N	DJK4	DJ4Q	DJK7	DJE4	DJQ2
2011 Q4	-	0.1	-0.1	-0.3	-1.1	0.1	-0.5	0.1	-0.3
2012 Q1	-0.3	-0.3	-0.5	-1.2	-0.5 [†]	-	0.4	0.4	-
Q2	-0.7	-0.7	-0.6	-2.8	-2.6	-3.0	-3.0	-0.4	-0.3 [†]
Q3	0.5	0.5	-0.1	-0.5	-1.1	0.1	-0.2	0.8	0.1
Q4	-0.9	-0.9	-0.8	-1.4	-0.8	-1.4 [†]	-1.1	-0.9	-0.8
2013 Q1	1.0	1.2	0.7	1.0	-0.7	1.0	-0.3 [†]	1.3 [†]	0.9
Q2	0.7	0.5	0.7	1.1	1.0	0.6	0.4	0.3	0.7
Q3	0.2	0.1	-0.2	-0.2	-1.0	-0.4	-1.0	0.1	-0.1
Q4	-	-	0.2	-0.2 [†]	1.1	0.1	1.1	-	-
2014 Q1	-0.3	-0.1 [†]	-0.3	1.3	0.9	2.1	1.8	0.2	0.3
Q2	0.3 [†]	-	-0.1 [†]	-	-	0.1	-0.1	0.2	-
Q3	0.3	0.4	0.5	-0.5	-	-0.2	0.5	0.5	0.5
Q4	0.3	0.4	-0.1	-0.5	-1.0	-0.5	-0.9	0.7	0.2
2015 Q1	-0.3	-0.2	0.1	-1.0	-0.1	-1.3	-0.7	-0.2	-
Q2	0.8	0.6	0.8	0.9	0.3	-0.2	-0.5	0.6	0.8
Q3	-0.1	-	0.5	-0.4	1.0	-0.8	0.1	0.2	0.8

[†]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 (2012=100)

Section	Whole economy		Manufacturing
	Unit labour costs	Unit wage costs	Unit wage costs
	A-U	A-U	C
Indices			
	LNNL	LNNK	DIX4
2011	98.2	98.5	96.2
2012	100.0	100.0	100.0
2013	100.3	100.0	102.8 [†]
2014	99.7	100.5 [†]	102.8
2011 Q4	98.3	97.8	96.3
2012 Q1	99.7	98.6	96.2
Q2	99.5	100.0	100.5
Q3	100.2	100.3	100.9
Q4	100.6	101.1	102.3
2013 Q1	100.1	99.4	101.6 [†]
Q2	101.1	101.1	102.8
Q3	100.1	99.6	102.9
Q4	99.7	99.7	103.7
2014 Q1	100.1 [†]	100.3 [†]	102.2
Q2	99.0	100.2	102.6
Q3	99.5	100.2	102.7
Q4	100.3	101.3	103.8
2015 Q1	100.8	102.0	105.0
Q2	101.2	102.0	106.2
Q3	101.4	102.8	107.4
Per cent change on quarter a year ago			
	DMWN	LOJE	DJ4J
2011 Q4	-0.2	-1.0	-0.4
2012 Q1	0.1	-1.6	-0.6 [†]
Q2	1.3	1.3	5.2
Q3	3.6	3.1	5.0
Q4	2.3	3.4	6.2
2013 Q1	0.5	0.8	5.6
Q2	1.6	1.1	2.3
Q3	-0.1	-0.8	2.0
Q4	-1.0	-1.4	1.4
2014 Q1	- [†]	0.9 [†]	0.6
Q2	-2.0	-0.9	-0.2
Q3	-0.6	0.6	-0.2
Q4	0.6	1.6	0.1
2015 Q1	0.7	1.7	2.7
Q2	2.2	1.8	3.5
Q3	1.9	2.7	4.6
Per cent change on previous quarter			
	DMWO	DMWL	DJ4I
2011 Q4	1.6	0.5	0.2
2012 Q1	1.4	0.8	-0.1
Q2	-0.2	1.4	4.5
Q3	0.8	0.4	0.4
Q4	0.4	0.8	1.4
2013 Q1	-0.5	-1.7	-0.7 [†]
Q2	1.0	1.7	1.2
Q3	-1.0	-1.5	0.1
Q4	-0.5	0.1	0.8
2014 Q1	0.4 [†]	0.6 [†]	-1.4
Q2	-1.1	-0.1	0.4
Q3	0.5	-	0.1
Q4	0.8	1.1	1.1
2015 Q1	0.5	0.7	1.2
Q2	0.4	-	1.1
Q3	0.2	0.8	1.1

[†] 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 (2012=100)

Divisions	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
	10-12	13-15	16-18	20-21	22-23	24-25	26-27	28	29-30	19,31-33
Level (£k)										
2012	58.8	44.1	45.8	135.9	49.1	46.3	66.3	57.6	62.7	56.7
Indices										
	DJ54	DJ57	DJ5F	DJ5I	DJ5L	DJB2	DJB7	DJC2	DJC5	DJD3
2011	101.3	111.8	99.5	108.0 [†]	103.2	96.6	93.9 [†]	101.9	97.7	116.4 [†]
2012	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2013	97.8 [†]	93.9 [†]	103.6 [†]	102.2	100.1 [†]	97.0 [†]	96.8	88.6 [†]	106.3 [†]	104.7
2014	100.8	88.3	102.1	105.7	104.5	99.4	98.0	99.0	106.4	107.5
2011 Q4	101.0	112.8	101.9 [†]	103.2	103.5 [†]	97.2	91.3	105.1 [†]	101.4	118.0 [†]
2012 Q1	100.7 [†]	103.4	106.1	105.0	99.7	100.2	98.2	103.2	100.7 [†]	109.6
Q2	100.6	97.8	97.4	97.4	101.4	99.4	99.9	101.0	98.5	101.0
Q3	100.3	98.1	97.5	99.7	99.8	102.6	100.9	98.2	100.7	96.3
Q4	98.5	100.7	99.0	97.9 [†]	99.1	97.8	101.0	97.6	100.1	93.1
2013 Q1	98.1	99.9 [†]	101.2	98.2	100.9	96.5 [†]	100.2 [†]	88.4	106.7	101.5
Q2	99.0	94.5	104.4	107.1	97.7	95.4	99.3	86.7	105.9	103.2
Q3	97.0	92.2	105.4	100.8	99.6	96.7	94.1	88.8	107.2	107.7
Q4	97.2	88.8	103.4	102.5	102.0	99.5	93.5	90.4	105.3	106.4
2014 Q1	101.6	91.1	103.2	104.3	105.8	100.1	96.1	96.7	106.1	108.6
Q2	101.2	91.9	101.6	103.7	105.8	98.8	98.1	100.8	107.2	106.1
Q3	100.8	85.4	102.2	106.9	105.1	99.2	99.3	100.5	104.8	107.3
Q4	99.6	84.7	101.4	107.9	101.1	99.5	98.4	97.8	107.3	107.8
2015 Q1	98.1	86.8	102.2	108.0	98.1	101.9	95.0	89.1	107.7	103.7
Q2	96.6	86.6	99.8	107.7	95.5	103.9	98.2	86.0	110.1	103.6
Q3	97.3	84.7	97.6	106.4	95.2	99.9	95.4	84.3	109.2	104.8
Per cent change on quarter a year ago										
	DJ56	DJ5E	DJ5H	DJ5K	DJ5N	DJB6	DJB9	DJC4	DJD2	DJD7
2011 Q4	2.4	12.9 [†]	3.5	-11.3	1.8 [†]	-0.6	-3.3	-0.5	11.2 [†]	6.0
2012 Q1	-0.3	-2.5	11.8	-6.3	-3.6	3.7	2.3	3.7	4.5	-1.9
Q2	-1.7	-12.8	-0.8	-11.8	-0.7	2.6 [†]	5.4 [†]	1.7	3.8	-15.0 [†]
Q3	-0.5	-15.7	-5.3	-6.1 [†]	-3.8	7.2	8.1	-5.4 [†]	2.7	-17.7
Q4	-2.5 [†]	-10.7	-2.8 [†]	-5.1	-4.3	0.6	10.6	-7.1	-1.3	-21.1
2013 Q1	-2.6	-3.4	-4.6	-6.5	1.2	-3.7	2.0	-14.3	6.0	-7.4
Q2	-1.6	-3.4	7.2	10.0	-3.6	-4.0	-0.6	-14.2	7.5	2.2
Q3	-3.3	-6.0	8.1	1.1	-0.2	-5.8	-6.7	-9.6	6.5	11.8
Q4	-1.3	-11.8	4.4	4.7	2.9	1.7	-7.4	-7.4	5.2	14.3
2014 Q1	3.6	-8.8	2.0	6.2	4.9	3.7	-4.1	9.4	-0.6	7.0
Q2	2.2	-2.8	-2.7	-3.2	8.3	3.6	-1.2	16.3	1.2	2.8
Q3	3.9	-7.4	-3.0	6.1	5.5	2.6	5.5	13.2	-2.2	-0.4
Q4	2.5	-4.6	-1.9	5.3	-0.9	-	5.2	8.2	1.9	1.3
2015 Q1	-3.4	-4.7	-1.0	3.5	-7.3	1.8	-1.1	-7.9	1.5	-4.5
Q2	-4.5	-5.8	-1.8	3.9	-9.7	5.2	0.1	-14.7	2.7	-2.4
Q3	-3.5	-0.8	-4.5	-0.5	-9.4	0.7	-3.9	-16.1	4.2	-2.3
Per cent change on previous quarter										
	DJ55	DJ58	DJ5G	DJ5J	DJ5M	DJB3	DJB8	DJC3	DJC6	DJD4
2011 Q4	0.2	-3.1	-1.1 [†]	-2.8 [†]	-0.2 [†]	1.6	-2.1	1.3 [†]	3.4	0.9 [†]
2012 Q1	-0.3 [†]	-8.3	4.1	1.7	-3.7	3.1	7.6	-1.8	-0.7 [†]	-7.1
Q2	-0.1	-5.4	-8.2	-7.2	1.7	-0.8	1.7	-2.1	-2.2	-7.8
Q3	-0.3	0.3	0.1	2.4	-1.6	3.2	1.0	-2.8	2.2	-4.7
Q4	-1.8	2.7	1.5	-1.8	-0.7	-4.7	0.1	-0.6	-0.6	-3.3
2013 Q1	-0.4	-0.8 [†]	2.2	0.3	1.8	-1.3 [†]	-0.8 [†]	-9.4	6.6	9.0
Q2	0.9	-5.4	3.2	9.1	-3.2	-1.1	-0.9	-1.9	-0.7	1.7
Q3	-2.0	-2.4	1.0	-5.9	1.9	1.4	-5.2	2.4	1.2	4.4
Q4	0.2	-3.7	-1.9	1.7	2.4	2.9	-0.6	1.8	-1.8	-1.2
2014 Q1	4.5	2.6	-0.2	1.8	3.7	0.6	2.8	7.0	0.8	2.1
Q2	-0.4	0.9	-1.6	-0.6	-	-1.3	2.1	4.2	1.0	-2.3
Q3	-0.4	-7.1	0.6	3.1	-0.7	0.4	1.2	-0.3	-2.2	1.1
Q4	-1.2	-0.8	-0.8	0.9	-3.8	0.3	-0.9	-2.7	2.4	0.5
2015 Q1	-1.5	2.5	0.8	0.1	-3.0	2.4	-3.5	-8.9	0.4	-3.8
Q2	-1.5	-0.2	-2.3	-0.3	-2.7	2.0	3.4	-3.5	2.2	-0.1
Q3	0.7	-2.2	-2.2	-1.2	-0.3	-3.8	-2.9	-2.0	-0.8	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

Seasonally adjusted (2012=100)

	Food, beverages & tobacco	Textiles, wearing apparel & leather	Wood & paper products, & printing	Chemicals, Pharmaceutic- als	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 (£)										
2012	32.1	26.5	25.1	73.2	26.8	25.0	35.6	30.8	33.4	30.2
Indices										
	DJK9	DJL4	DJL7	DJM4	DJM7	DJN4	DJN7	DJO5	DJO8	DJP3
2011	101.6	111.2 [†]	100.2 [†]	111.9	100.0	97.0 [†]	92.6	100.9	99.0	115.0
2012	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2013	97.3 [†]	94.1	101.6	103.7 [†]	95.5 [†]	92.5	96.7	87.5	106.9 [†]	104.3 [†]
2014	101.5	87.8	100.3	108.1	101.5	95.4	100.6 [†]	96.0 [†]	105.4	105.5
2011 Q4	100.9 [†]	106.8 [†]	102.3 [†]	106.6	105.5 [†]	96.7	89.3	103.5 [†]	103.1	115.1
2012 Q1	102.6	103.2	102.8	106.6 [†]	102.0	97.9	97.3	103.7	100.3	110.4
Q2	100.3	99.5	97.3	97.4	101.9	97.8	99.7 [†]	103.7	99.3	100.5
Q3	100.3	98.4	99.5	97.4	98.0	105.6 [†]	101.1	97.3	100.0 [†]	94.0 [†]
Q4	96.8	98.9	100.4	98.6	98.1	98.7	101.8	95.3	100.4	95.1
2013 Q1	97.9	96.3	101.7	99.6	95.1	93.8	101.6	86.5	105.2	101.7
Q2	98.8	94.5	103.8	106.2	93.9	91.3	96.7	85.6	107.1	102.6
Q3	97.1	93.8	100.8	103.5	95.0	90.1	91.1	88.5	108.6	105.8
Q4	95.4	91.7	99.9	105.6	97.9	94.6	97.3	89.3	106.6	107.0
2014 Q1	99.9	95.2	99.3	108.0	101.3	96.2	96.9	95.3	107.6	107.2
Q2	101.4	93.4	100.6	107.8	104.0	93.4	99.9	97.9	103.8	104.1
Q3	102.6	84.0	101.6	107.9	104.2	95.4	102.3	95.7	104.5	104.9
Q4	101.9	78.5	99.7	108.6	96.6	96.6	103.2	94.9	105.8	105.8
2015 Q1	98.9	80.5	102.9	111.6	92.9	97.9	98.5	88.9	107.3	105.8
Q2	98.0	81.1	99.0	113.2	90.6	101.9	97.2	85.5	106.6	104.9
Q3	96.1	86.6	97.8	110.9	91.2	99.0	98.7	85.6	108.1	105.8
Per cent change on quarter a year ago										
	DJL3	DJL6	DJM3	DJM6	DJM9	DJN6	DJN9	DJO7	DJP2	DJP5
2011 Q4	1.6	15.8 [†]	6.0 [†]	-6.9 [†]	11.3 [†]	4.5	-4.0	-0.7	14.4 [†]	3.3 [†]
2012 Q1	0.9 [†]	-0.9	8.0	-6.4	4.5	2.1 [†]	4.2 [†]	7.0 [†]	5.4	-0.9
Q2	-3.0	-8.1	-2.1	-14.6	3.9	-1.3	3.6	3.8	3.5	-15.0
Q3	-0.1	-21.5	-4.1	-13.7	-0.9	9.9	10.4	-5.7	-1.7	-18.5
Q4	-4.1	-7.4	-1.9	-7.5	-7.0	2.1	14.0	-7.9	-2.6	-17.4
2013 Q1	-4.6	-6.7	-1.1	-6.6	-6.8	-4.2	4.4	-16.6	4.9	-7.9
Q2	-1.5	-5.0	6.7	9.0	-7.9	-6.6	-3.0	-17.5	7.9	2.1
Q3	-3.2	-4.7	1.3	6.3	-3.1	-14.7	-9.9	-9.0	8.6	12.6
Q4	-1.4	-7.3	-0.5	7.1	-0.2	-4.2	-4.4	-6.3	6.2	12.5
2014 Q1	2.0	-1.1	-2.4	8.4	6.5	2.6	-4.6	10.2	2.3	5.4
Q2	2.6	-1.2	-3.1	1.5	10.8	2.3	3.3	14.4	-3.1	1.5
Q3	5.7	-10.4	0.8	4.3	9.7	5.9	12.3	8.1	-3.8	-0.9
Q4	6.8	-14.4	-0.2	2.8	-1.3	2.1	6.1	6.3	-0.8	-1.1
2015 Q1	-1.0	-15.4	3.6	3.3	-8.3	1.8	1.7	-6.7	-0.3	-1.3
Q2	-3.4	-13.2	-1.6	5.0	-12.9	9.1	-2.7	-12.7	2.7	0.8
Q3	-6.3	3.1	-3.7	2.8	-12.5	3.8	-3.5	-10.6	3.4	0.9
Per cent change on previous quarter										
	DJL2	DJL5	DJM2	DJM5	DJM8	DJN5	DJN8	DJO6	DJO9	DJP4
2011 Q4	0.5	-14.8 [†]	-1.4 [†]	-5.6 [†]	6.7 [†]	0.6 [†]	-2.5 [†]	0.3 [†]	1.4	-0.2
2012 Q1	1.7 [†]	-3.4	0.5	-	-3.3	1.2	9.0	0.2	-2.7	-4.1
Q2	-2.2	-3.6	-5.4	-8.6	-0.1	-0.1	2.5	-	-1.0	-9.0
Q3	-	-1.1	2.3	-	-3.8	8.0	1.4	-6.2	0.7 [†]	-6.5 [†]
Q4	-3.5	0.5	0.9	1.2	0.1	-6.5	0.7	-2.1	0.4	1.2
2013 Q1	1.1	-2.6	1.3	1.0	-3.1	-5.0	-0.2	-9.2	4.8	6.9
Q2	0.9	-1.9	2.1	6.6	-1.3	-2.7	-4.8	-1.0	1.8	0.9
Q3	-1.7	-0.7	-2.9	-2.5	1.2	-1.3	-5.8	3.4	1.4	3.1
Q4	-1.8	-2.2	-0.9	2.0	3.1	5.0	6.8	0.9	-1.8	1.1
2014 Q1	4.7	3.8	-0.6	2.3	3.5	1.7	-0.4	6.7	0.9	0.2
Q2	1.5	-1.9	1.3	-0.2	2.7	-2.9	3.1	2.7	-3.5	-2.9
Q3	1.2	-10.1	1.0	0.1	0.2	2.1	2.4	-2.2	0.7	0.8
Q4	-0.7	-6.5	-1.9	0.6	-7.3	1.3	0.9	-0.8	1.2	0.9
2015 Q1	-2.9	2.5	3.2	2.8	-3.8	1.3	-4.6	-6.3	1.4	-
Q2	-0.9	0.7	-3.8	1.4	-2.5	4.1	-1.3	-3.8	-0.7	-0.9
Q3	-1.9	6.8	-1.2	-2.0	0.7	-2.8	1.5	0.1	1.4	0.9

[†] 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 (2012=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
Level (£k)											
2012	33.4	45.7	20.9	75.9	100.3	365.3	48.2	27.8	34.7	27.5	44.8
Indices											
2011	DJE6	DJE9	DJF4	DJF7	DJG5	DJH4	DJH7	DJI2	DJI5	DJJ3	DJJ6
2012	99.8	102.1 [†]	98.0	97.0 [†]	100.9	101.2	98.5	96.1	97.6	99.1 [†]	101.2 [†]
2013	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2014	104.9 [†]	101.7	96.1 [†]	99.6	101.7 [†]	96.9 [†]	102.6 [†]	105.1 [†]	99.8 [†]	101.1	96.8
2015	109.4	108.1	94.4	95.9	100.4	97.5	103.0	108.7	100.2	99.7	102.0
2011 Q4	100.1	101.9 [†]	99.6 [†]	98.1 [†]	102.3	101.0 [†]	100.7	95.6	99.1	97.8 [†]	102.3 [†]
2012 Q1	99.5 [†]	101.6	100.0	101.6	100.3 [†]	99.8	101.9 [†]	99.1 [†]	99.7	98.6	101.2
Q2	99.0	100.1	100.1	100.4	100.6	101.8	98.9	98.2	99.8	98.8	100.4
Q3	100.9	99.3	101.0	99.5	100.1	99.3	100.1	100.4	100.8	105.6	101.7
Q4	100.6	99.0	98.8	98.5	99.0	99.1	99.1	102.3	99.7	97.0	96.7
2013 Q1	102.6	102.2	98.5	99.9	102.0	99.7	101.4	100.9	99.9 [†]	98.8	99.6
Q2	104.5	101.9	97.1	100.2	102.0	96.9	103.0	104.6	99.5	101.2	98.7
Q3	105.8	100.7	95.5	99.7	102.0	95.2	103.7	106.6	99.8	101.3	94.8
Q4	106.5	101.9	93.3	98.5	100.8	95.9	102.1	108.3	100.0	103.1	94.2
2014 Q1	108.1	105.3	93.7	96.2	100.4	96.3	101.4	108.7	100.1	101.2	99.1
Q2	109.0	107.0	94.5	95.6	100.1	97.6	102.3	108.6	99.8	101.6	100.3
Q3	109.3	109.5	94.9	94.7	98.9	98.8	103.3	108.9	100.3	98.7	103.8
Q4	111.0	110.7	94.4	96.9	102.1	97.2	105.0	108.5	100.4	97.1	104.9
2015 Q1	111.1	113.1	95.2	97.3	100.1	97.4	103.1	110.0	99.8	96.3	103.3
Q2	112.4	112.2	95.5	98.7	98.1	98.7	104.5	111.7	100.3	95.9	104.2
Q3	112.9	111.4	95.5	99.6	96.5	101.2	103.7	113.6	100.3	95.3	107.3
Per cent change on quarter a year ago											
2011 Q4	DJE8	DJF3	DJF6	DJF9	DJG8	DJH6	DJH9	DJI4	DJI7	DJJ5	DJJ8
2012 Q1	2.2	-0.2 [†]	4.2	-3.0 [†]	1.9	-0.6	6.6	2.4 [†]	1.8	1.5 [†]	3.8 [†]
2012 Q2	0.8 [†]	0.3	3.8 [†]	5.7	0.4	-1.2 [†]	6.5 [†]	3.3	3.5	-2.4	-0.8
Q3	-0.8	-2.1	2.9	5.1	1.0 [†]	0.6	1.4	2.2	3.3	0.4	1.0
Q4	0.3	-3.7	2.1	1.3	-1.7	-2.4	-0.1	3.6	2.4	6.5	0.7
2013 Q1	0.5	-2.8	-0.8	0.4	-3.2	-1.9	-1.6	7.0	0.6	-0.8	-5.5
2013 Q2	3.1	0.6	-1.5	-1.7	1.7	-0.1	-0.5	1.8	0.2 [†]	0.2	-1.6
Q3	5.6	1.8	-3.0	-0.2	1.4	-4.8	4.1	6.5	-0.3	2.4	-1.7
Q4	4.9	1.4	-5.4	0.2	1.9	-4.1	3.6	6.2	-1.0	-4.1	-6.8
2014 Q1	5.9	2.9	-5.6	-	1.8	-3.2	3.0	5.9	0.3	6.3	-2.6
2014 Q2	5.4	3.0	-4.9	-3.7	-1.6	-3.4	-	7.7	0.2	2.4	-0.5
Q3	4.3	5.0	-2.7	-4.6	-1.9	0.7	-0.7	3.8	0.3	0.4	1.6
Q4	3.3	8.7	-0.6	-5.0	-3.0	3.8	-0.4	2.2	0.5	-2.6	9.5
2015 Q1	4.2	8.6	1.2	-1.6	1.3	1.4	2.8	0.2	0.4	-5.8	11.4
2015 Q2	2.8	7.4	1.6	1.1	-0.3	1.1	1.7	1.2	-0.3	-4.8	4.2
Q3	3.1	4.9	1.1	3.2	-2.0	1.1	2.2	2.9	0.5	-5.6	3.9
Q4	3.3	1.7	0.6	5.2	-2.4	2.4	0.4	4.3	-	-3.4	3.4
Per cent change on previous quarter											
2011 Q4	DJE7	DJF2	DJF5	DJF8	DJG6	DJH5	DJH8	DJI3	DJI6	DJJ4	DJJ7
2012 Q1	-0.5	-1.2 [†]	0.7 [†]	-0.1 [†]	0.5	-0.7 [†]	0.5	-1.3	0.7	-1.4 [†]	1.3
2012 Q2	-0.6 [†]	-0.3	0.4	3.6	-2.0 [†]	-1.2	1.2 [†]	3.7 [†]	0.6	0.8	-1.1 [†]
Q3	-0.5	-1.5	0.1	-1.2	0.3	2.0	-2.9	-0.9	0.1	0.2	-0.8
Q4	1.9	-0.8	0.9	-0.9	-0.5	-2.5	1.2	2.2	1.0	6.9	1.3
2013 Q1	-0.3	-0.3	-2.2	-1.0	-1.1	-0.2	-1.0	1.9	-1.1	-8.1	-4.9
2013 Q2	2.0	3.2	-0.3	1.4	3.0	0.6	2.3	-1.4	0.2 [†]	1.9	3.0
Q3	1.9	-0.3	-1.4	0.3	-	-2.8	1.6	3.7	-0.4	2.4	-0.9
Q4	1.2	-1.2	-1.6	-0.5	-	-1.8	0.7	1.9	0.3	0.1	-4.0
2014 Q1	0.7	1.2	-2.3	-1.2	-1.2	0.7	-1.5	1.6	0.2	1.8	-0.6
2014 Q2	1.5	3.3	0.4	-2.3	-0.4	0.4	-0.7	0.4	0.1	-1.8	5.2
Q3	0.8	1.6	0.9	-0.6	-0.3	1.3	0.9	-0.1	-0.3	0.4	1.2
Q4	0.3	2.3	0.4	-0.9	-1.2	1.2	1.0	0.3	0.5	-2.9	3.5
2015 Q1	1.6	1.1	-0.5	2.3	3.2	-1.6	1.6	-0.4	0.1	-1.6	1.1
2015 Q2	0.1	2.2	0.8	0.4	-2.0	0.2	-1.8	1.4	-0.6	-0.8	-1.5
Q3	1.2	-0.8	0.3	1.4	-2.0	1.3	1.4	1.5	0.5	-0.4	0.9
Q4	0.4	-0.7	-	0.9	-1.6	2.5	-0.8	1.7	-	-0.6	3.0

[†] 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 (2012=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
Level (£)											
2012	22.4	25.0	15.7	42.0	56.3	230.7	27.6	17.8	24.1	21.0	30.9
Indices											
	DJQ4	DJQ7	DJR2	DJR5	DJS3	DJS6	DJS9	DJT7	DJU2	DJV6	DJV9
2011	100.7	104.0 [†]	98.9	97.0	100.6	102.7 [†]	100.1	97.6	99.6 [†]	99.8 [†]	99.8 [†]
2012	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2013	103.8 [†]	101.6	94.2 [†]	98.4 [†]	101.6 [†]	100.2	101.8 [†]	105.2 [†]	99.6	103.1	96.8
2014	107.2	108.2	93.3	94.5	99.8	99.8	101.5	112.6	99.6	100.1	101.0
2011 Q4	99.7	102.6 [†]	100.5 [†]	96.1	101.0	101.8	101.4	97.8 [†]	101.0 [†]	95.7 [†]	101.9 [†]
2012 Q1	99.4 [†]	100.8	100.6	99.6 [†]	100.2	97.8 [†]	102.3	99.3	101.0	98.5	100.4
Q2	99.9	100.2	100.8	100.5	101.0	100.9	99.2	98.3	99.9	99.5	101.2
Q3	101.1	100.0	100.4	99.1	99.3	100.6	99.0	99.6	100.4	103.9	103.4
Q4	99.7	99.0	98.1	100.9	99.5	100.8	99.5 [†]	102.7	98.8	98.1	95.0
2013 Q1	101.6	101.1	96.0	99.7	102.4 [†]	101.6	100.6	99.6	99.7	99.4	99.3
Q2	103.3	101.9	95.6	99.1	102.2	103.9	102.4	103.5	99.9	103.5	99.1
Q3	104.8	101.6	93.2	97.4	101.0	96.3	102.8	107.8	99.3	104.9	95.9
Q4	105.5	101.8	91.9	97.3	100.6	98.9	101.4	110.0	99.6	104.6	93.0
2014 Q1	106.4	104.1	93.4	94.6	99.2	99.0	101.5	111.9	99.7	103.1	96.5
Q2	106.9	106.5	93.7	93.8	99.4	99.6	100.7	113.6	99.5	100.3	99.1
Q3	106.8	110.4	93.8	94.4	99.5	102.0	101.5	113.6	99.8	100.5	100.8
Q4	108.8	111.7	92.3	95.2	101.0	98.6	102.1	111.3	99.3	96.3	107.5
2015 Q1	109.4	113.6	92.6	96.6	101.1	99.6	100.0	112.3	99.5	93.7	102.3
Q2	110.9	112.5	92.2	97.2	99.0	99.3	103.0	113.9	100.0	96.3	105.6
Q3	113.2	112.5	91.9	100.3	98.8	102.0	103.2	114.7	100.6	96.9	107.1
Per cent change on quarter a year ago											
	DJQ6	DJQ9	DJR4	DJR7	DJS5	DJS8	DJT6	DJT9	DJU7	DJV8	DJW3
2011 Q4	0.8	-0.7 [†]	5.6 [†]	-2.0 [†]	-0.4	2.8	4.2 [†]	3.3 [†]	2.5	-4.5	6.4 [†]
2012 Q1	-0.5 [†]	-1.7	5.5	2.6	0.7 [†]	-3.8	5.1	1.7	3.0	-4.3	0.3
Q2	-1.2	-4.9	1.6	4.0	0.7	-2.5 [†]	-1.5	0.5	0.7 [†]	-2.1 [†]	2.8
Q3	-0.9	-5.0	-0.2	1.0	-2.3	-2.9	-2.1	2.6	0.4	4.8	4.6
Q4	-	-3.5	-2.4	5.0	-1.5	-1.0	-1.9	5.0	-2.2	2.5	-6.8
2013 Q1	2.2	0.3	-4.6	0.1	2.2	3.9	-1.7	0.3	-1.3	0.9	-1.1
Q2	3.4	1.7	-5.2	-1.4	1.2	3.0	3.2	5.3	-	4.0	-2.1
Q3	3.7	1.6	-7.2	-1.7	1.7	-4.3	3.8	8.2	-1.1	1.0	-7.3
Q4	5.8	2.8	-6.3	-3.6	1.1	-1.9	1.9	7.1	0.8	6.6	-2.1
2014 Q1	4.7	3.0	-2.7	-5.1	-3.1	-2.6	0.9	12.3	-	3.7	-2.8
Q2	3.5	4.5	-2.0	-5.3	-2.7	-4.1	-1.7	9.8	-0.4	-3.1	-
Q3	1.9	8.7	0.6	-3.1	-1.5	5.9	-1.3	5.4	0.5	-4.2	5.1
Q4	3.1	9.7	0.4	-2.2	0.4	-0.3	0.7	1.2	-0.3	-7.9	15.6
2015 Q1	2.8	9.1	-0.9	2.1	1.9	0.6	-1.5	0.4	-0.2	-9.1	6.0
Q2	3.7	5.6	-1.6	3.6	-0.4	-0.3	2.3	0.3	0.5	-4.0	6.6
Q3	6.0	1.9	-2.0	6.3	-0.7	-	1.7	1.0	0.8	-3.6	6.3
Per cent change on previous quarter											
	DJQ5	DJQ8	DJR3	DJR6	DJS4	DJS7	DJT2	DJT8	DJU6	DJV7	DJW2
2011 Q4	-2.3	-2.6	-0.1 [†]	-2.0 [†]	-0.6	-1.7 [†]	0.3 [†]	0.7 [†]	1.0	-3.4	3.0 [†]
2012 Q1	-0.3 [†]	-1.8	0.1	3.6	-0.8	-3.9	0.9	1.5	- [†]	2.9 [†]	-1.5
Q2	0.5	-0.6 [†]	0.2	0.9	0.8	3.2	-3.0	-1.0	-1.1	1.0	0.8
Q3	1.2	-0.2	-0.4	-1.4	-1.7	-0.3	-0.2	1.3	0.5	4.4	2.2
Q4	-1.4	-1.0	-2.3	1.8	0.2	0.2	0.5	3.1	-1.6	-5.6	-8.1
2013 Q1	1.9	2.1	-2.1	-1.2	2.9 [†]	0.8	1.1	-3.0	0.9	1.3	4.5
Q2	1.7	0.8	-0.4	-0.6	-0.2	2.3	1.8	3.9	0.2	4.1	-0.2
Q3	1.5	-0.3	-2.5	-1.7	-1.2	-7.3	0.4	4.2	-0.6	1.4	-3.2
Q4	0.7	0.2	-1.4	-0.1	-0.4	2.7	-1.4	2.0	0.3	-0.3	-3.0
2014 Q1	0.9	2.3	1.6	-2.8	-1.4	0.1	0.1	1.7	0.1	-1.4	3.8
Q2	0.5	2.3	0.3	-0.8	0.2	0.6	-0.8	1.5	-0.2	-2.7	2.7
Q3	-0.1	3.7	0.1	0.6	0.1	2.4	0.8	-	0.3	0.2	1.7
Q4	1.9	1.2	-1.6	0.8	1.5	-3.3	0.6	-2.0	-0.5	-4.2	6.6
2015 Q1	0.6	1.7	0.3	1.5	0.1	1.0	-2.1	0.9	0.2	-2.7	-4.8
Q2	1.4	-1.0	-0.4	0.6	-2.1	-0.3	3.0	1.4	0.5	2.8	3.2
Q3	2.1	-	-0.3	3.2	-0.2	2.7	0.2	0.7	0.6	0.6	1.4

[†] 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

Seasonally adjusted (2012=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
2011	101.2	..	..	101.5	..	..
2012	100.0	..	..	100.0	..	..
2013	100.8	..	..	100.1	..	..
2014	101.7 [†]	100.8 [†]
2011 Q4	101.6	1.0	-0.2	101.5	1.3	-0.5
2012 Q1	100.9	0.5	-0.7 [†]	100.9	0.3	-0.6
Q2	99.7	-1.0	-1.2	100.0	-2.0	-1.0
Q3	100.2	-1.6	0.5	100.0 [†]	-2.0	-
Q4	99.2 [†]	-2.4	-1.0	99.2	-2.3	-0.8
2013 Q1	100.1	-0.8	1.0	99.6	-1.3	0.4
Q2	100.9	1.2	0.8	100.3	0.4	0.7 [†]
Q3	101.0	0.8	0.1	100.2	0.3 [†]	-0.1
Q4	101.0	1.8	-	100.3	1.1	-
2014 Q1	101.1	0.9 [†]	0.1	100.3	0.7	-
Q2	101.5	0.6	0.4	100.5	0.2	0.2
Q3	101.9	0.9	0.4	101.2	1.0	0.7
Q4	102.4	1.4	0.5	101.0	0.7	-0.2
2015 Q1	102.0	0.9	-0.4	101.2	0.8	0.2
Q2	102.9	1.4	0.9	101.8	1.3	0.7
Q3	102.6	0.7	-0.3	102.3	1.1	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 industries¹

United Kingdom

(2012=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 (£)				
2012	25 019	11.8	44 520	23.6
Indices				
	DJ4K	DJJ9	DJD8	DJP6
1998	83.9 [†]	79.6 [†]	102.4	95.8
1999	98.0	93.4	102.4 [†]	96.4 [†]
2000	107.6	101.3	102.6	96.0
2001	110.4	107.4	102.4	96.0
2002	127.1	125.4	106.4	100.6
2003	121.9	118.3	108.8	104.3
2004	116.4	112.9	111.7	107.2
2005	117.9	116.9	105.8	101.3
2006	112.5	109.5	105.3	101.5
2007	109.4	108.6	104.2	100.6
2008	112.8	111.8	101.0	98.9
2009	104.7	96.6	91.3	91.4
2010	97.6	89.0	104.7	103.2
2011	107.8	102.5	107.3	107.7
2012	100.0	100.0	100.0	100.0
2013	113.1	109.5	101.4	99.0
2014	113.9	109.4	105.9	100.9
per cent change on previous year				
	DJ4L	DJK2	DJE2	DJP8
1998	10.0 [†]	11.8	-1.3	-0.6 [†]
1999	16.8	17.2 [†]	- [†]	0.6
2000	9.8	8.5	0.2	-0.4
2001	2.6	6.0	-0.2	-
2002	15.1	16.7	3.9	4.8
2003	-4.1	-5.6	2.3	3.7
2004	-4.5	-4.6	2.7	2.8
2005	1.3	3.6	-5.3	-5.5
2006	-4.6	-6.4	-0.5	0.2
2007	-2.8	-0.8	-1.0	-0.9
2008	3.1	3.0	-3.1	-1.7
2009	-7.2	-13.6	-9.6	-7.6
2010	-6.8	-7.9	14.7	12.9
2011	10.5	15.1	2.5	4.4
2012	-7.2	-2.4	-6.8	-7.2
2013	13.1	9.4	1.4	-1.0
2014	0.7	-	4.4	1.9

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)

		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 (2012=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
2011	98.9	99.0	98.2	100.1	98.8	99.1 [†]	99.4	99.5 [†]	98.9	97.6
2012	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2013	101.2	101.2	101.8	100.0	99.5 [†]	101.2	99.4 [†]	100.8	101.6	102.1 [†]
2014	103.5	103.5	104.5	100.1	99.9	101.3	100.1	101.3	104.0 [†]	104.6
2011 Q4	98.8	98.8	98.4	100.0	97.9 [†]	98.8	98.4 [†]	98.7 [†]	98.7	98.1
2012 Q1	99.2	99.2	99.0	100.0	98.6	98.6	98.9	98.9	99.1	98.9
Q2	99.9	99.9	99.6	100.0	100.3	100.1	100.3	100.2	99.8	99.5
Q3	100.2	100.2	100.5	100.0	101.0	101.4	100.6	100.8	100.1	100.5
Q4	100.7	100.7	100.9	100.0	100.1	99.9	100.2	100.1	100.9	101.2
2013 Q1	100.5	100.3	101.1	99.8	99.3	100.9	99.1	100.3	100.7	101.4
Q2	100.8	100.8	101.3	100.0	98.9	100.5	98.9	100.3	101.3	101.5
Q3	101.4	101.4 [†]	102.3	100.0 [†]	99.7	102.1	99.7	101.8	101.9	102.4 [†]
Q4	102.0	102.0	102.7	100.0	100.0	101.2 [†]	99.9	100.9	102.5	102.9
2014 Q1	102.8	102.7	103.6	99.9	99.2	100.7	99.2	100.5	103.2 [†]	103.6
Q2	103.3	103.5	104.5	100.2	99.4	100.9	99.7	101.2	104.1	104.6
Q3	103.7	103.8	104.6	100.1	100.2	101.2	100.4	101.3	104.4	104.8
Q4	104.0	104.1	105.5	100.1	100.7	102.2	101.1	102.3	104.5	105.5
2015 Q1	104.7	104.7	105.7	100.0	102.1	102.7	102.4	103.0	105.1	105.8
Q2	104.5	104.6	105.5	100.1	102.0	103.2	102.0	102.9	105.0	105.6
Q3	105.1	105.1	105.3	100.0	102.5	102.3	102.4	102.4	105.5	105.4
Per cent change on quarter a year ago	DIW9	LNN0	LZVC		DJW8	DK3U	DJX3	DK44	DK2I	DK58
2011 Q4	0.1	0.1	-0.1		-1.4 [†]	-2.7	-1.9	-3.9	0.3	0.6
2012 Q1	0.1	-	0.4		-1.3	-2.3	-1.5 [†]	-2.6 [†]	-	1.0
Q2	0.7	0.7	2.2		1.1	1.4 [†]	0.6	1.0	0.7	2.5
Q3	1.6	1.5	2.4		2.7	3.3	1.8	2.2	1.6	3.1
Q4	1.9	1.9	2.5		2.2	1.1	1.8	1.4	2.2	3.2
2013 Q1	1.3	1.1	2.1		0.7	2.3	0.2	1.4	1.6	2.5
Q2	0.9	0.9	1.7		-1.4	0.4	-1.4	0.1	1.5	2.0
Q3	1.2	1.2 [†]	1.8		-1.3	0.7	-0.9	1.0	1.8	1.9 [†]
Q4	1.3	1.3	1.8		-0.1	1.3	-0.3	0.8	1.6	1.7
2014 Q1	2.3	2.4	2.5		-0.1	-0.2	0.1	0.2	2.5 [†]	2.2
Q2	2.5	2.7	3.2		0.5	0.4	0.8	0.9	2.8	3.1
Q3	2.3	2.4	2.2		0.5	-0.9	0.7	-0.5	2.5	2.3
Q4	2.0	2.1	2.7		0.7	1.0	1.2	1.4	2.0	2.5
2015 Q1	1.8	1.9	2.0		2.9	2.0	3.2	2.5	1.8	2.1
Q2	1.2	1.1	1.0		2.6	2.3	2.3	1.7	0.9	1.0
Q3	1.4	1.3	0.7		2.3	1.1	2.0	1.1	1.1	0.6
Per cent change on previous quarter	DIW8	TXAJ	TXBU		DJW7	DK3T	DJX2	DK3Y	DK2H	DK57
2011 Q4	0.2	0.1	0.3		-0.4 [†]	0.6	-0.4	0.1 [†]	0.2	0.6
2012 Q1	0.4	0.4	0.6		0.7	-0.2	0.5 [†]	0.2	0.4	0.8
Q2	0.7	0.7	0.6		1.7	1.5	1.4	1.3	0.7	0.6
Q3	0.3	0.3	0.9		0.7	1.3	0.3	0.6	0.3	1.0
Q4	0.5	0.5	0.4		-0.9	-1.5	-0.4	-0.7	0.8	0.7
2013 Q1	-0.2	-0.4	0.2		-0.8	1.0	-1.1	0.2	-0.2	0.2
Q2	0.3	0.5	0.2		-0.4	-0.4	-0.2	-	0.6	0.1
Q3	0.6	0.6 [†]	1.0		0.8	1.6	0.8	1.5	0.6	0.9 [†]
Q4	0.6	0.6	0.4		0.3	-0.9 [†]	0.2	-0.9	0.6	0.5
2014 Q1	0.8	0.7	0.9		-0.8	-0.5	-0.7	-0.4	0.7 [†]	0.7
Q2	0.5	0.8	0.9		0.2	0.2	0.5	0.7	0.9	1.0
Q3	0.4	0.3	0.1		0.8	0.3	0.7	0.1	0.3	0.2
Q4	0.3	0.3	0.9		0.5	1.0	0.7	1.0	0.1	0.7
2015 Q1	0.7	0.6	0.2		1.4	0.5	1.3	0.7	0.6	0.3
Q2	-0.2	-0.1	-0.2		-0.1	0.5	-0.4	-0.1	-0.1	-0.2
Q3	0.6	0.5	-0.2		0.5	-0.9	0.4	-0.5	0.5	-0.2

[†]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 Q2	–	–	–	–	–	–	–	–
Q3	–	–	–	–	–	–	–	–
Q4	–	–	–	–	–	–	–	–
2012 Q1	–	–	–	–	–	–	–	–
Q2	–	–	–	–	–	–	–	–
Q3	–	–	–	–	–	–	–	–
Q4	–	–	–	–	–	–	–	–
2013 Q1	–	–	–	–	–	–	–	–
Q2	–	–	–	–	–	–	–	–
Q3	–	–	–	–	–	–	–	–
Q4	–	–	–	–	–	–	–	–
2014 Q1	–	–	–0.1	–0.1	–	–	–0.1	–0.1
Q2	–0.2	–0.2	–0.2	–0.1	–0.2	–0.2	0.1	0.2
Q3	–0.2	–	–0.1	0.1	–0.2	–	–	–0.1
Q4	–0.2	–	–0.2	–0.1	–0.2	–	–	–
2015 Q1	–0.1	0.1	–	0.1	–0.1	0.1	0.3	0.2
Q2	–	–0.1	–0.1	–0.2	–	–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
2011 Q2	–	0.1	–0.1	–	–0.1	–
Q3	–	–0.1	–	–	0.1	0.1
Q4	–0.1	–	–	–	–	–
2012 Q1	–	–	–	–	0.1	–
Q2	–	–	–	–	0.1	–
Q3	–	–	–	–	–	–
Q4	–0.1	–0.1	–	–	–	–
2013 Q1	–0.1	–	–0.1	–0.1	0.1	0.1
Q2	–0.2	–0.1	–0.2	–0.1	0.2	0.1
Q3	–0.3	–0.1	–0.2	–	0.2	–
Q4	–0.3	–0.1	–0.5	–0.3	0.4	0.2
2014 Q1	–0.7	–0.4	–0.8	–0.3	0.7	0.4
Q2	–0.8	–0.2	–0.7	–0.1	0.8	0.2
Q3	–0.9	–0.2	–0.8	–0.1	1.0	0.2
Q4	–0.8	–	–0.7	–0.2	0.9	0.1
2015 Q1	–0.3	0.1	–0.4	–	0.3	–0.1
Q2	–0.4	–0.3	–0.3	–	0.4	0.1

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 Q2	–	–	–	–
Q3	–	–	–	–
Q4	–	–	–	–
2012 Q1	–	–	–	–
Q2	–	–	0.1	0.1
Q3	–	–	–	–0.1
Q4	–	–	–	–
2013 Q1	–0.1	–0.1	–	–
Q2	–	0.1	–0.1	–
Q3	–0.1	–0.1	–0.1	–0.1
Q4	–	0.1	–	0.1
2014 Q1	0.1	–	–	–
Q2	0.1	0.1	0.1	0.1
Q3	0.4	0.2	0.3	0.1
Q4	0.2	–0.1	0.2	–
2015 Q1	0.2	–	0.1	–0.1
Q2	–	–0.1	0.1	0.1