

Statistical bulletin

# Labour productivity, UK: January to March 2015

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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## Table of contents

1. [Labour Productivity, Q1 \(Jan to Mar\) 2015](#)
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. [Industry spotlight - information and communication services industry](#)
9. [Revisions](#)
10. [Notes on sources](#)
11. [Background notes](#)

# 1 . Labour Productivity, Q1 (Jan to Mar) 2015

- UK labour productivity as measured by output per hour grew by 0.3% in the first quarter of 2015 compared with the previous quarter. This measure is 1.3% higher than the same period in 2014, the fastest annual growth since Q1 2012.
- Whole economy unit labour costs decreased by 0.6% on the quarter and were 0.9% higher than a year ago. Growth of labour costs per hour remains subdued.
- Output per hour in the manufacturing and production sectors fell on the quarter and on the year.
- Output per hour grew in the services sector, though estimates of individual service industries were more mixed.
- New for this release is an Industry Spotlight section, focusing on productivity in Information and communication services. This shows a pronounced slowdown in productivity in telecommunications services in recent years, after very strong growth prior to the economic downturn.

## 2 . About this release

This release reports labour productivity estimates for the first quarter (Jan to Mar) 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 30 June 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.

New for this release is an Industry Spotlight section, focusing on productivity in Information and communication services. New seasonal adjustment factors have altered the quarterly path of hours worked and improved the short-term tracking of output per hour. Further information is provided in the Revisions section below.

## 3 . Interpreting these statistics

Whole economy output (measured by gross value added - GVA) increased by 0.4% in the first quarter of 2015, while the Labour Force Survey (LFS) shows that the number of workers, jobs and hours increased by 0.7%, 0.6% and 0.1% respectively over this period<sup>1</sup>. This combination of movements in outputs and labour inputs implies that labour productivity across the whole economy fell a little in terms of output per worker and output per job but increased a little in terms of output per hour.

Differences between growth of output per worker and output per job reflect changes in the ratio of jobs to workers. This ratio fell very slightly in Q1. 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, a shift towards part-time employment will tend to reduce average hours. 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 first quarter, whole economy output per hour grew by 0.3% and ULCs fell by 0.6%. Plugging these values into the ULC equation and re-arranging yields an implied fall of approximately 0.3% 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), chiefly because the labour cost component includes estimated remuneration of self-employed labour, which is not included in AWE and ILCH.

Most of the series in this release are designated as National Statistics, meaning their production has been subject to rigorous quality assurance and methodological scrutiny. However, some service industry estimates use component series from the Index of Services (IOS) which are designated as experimental statistics (that is, not yet accredited as National Statistics, for example because the methodology is under development or reflecting concerns over data sources). Labour productivity estimates that use these series as their numerators are also labelled as experimental statistics. Market sector productivity estimates are also experimental series. More information on the experimental IOS series is available on the [Guidance and methodology](#) section of the ONS website.

## Notes for interpreting these statistics

1. Growth rates for whole economy workers, jobs and hours shown in Table 10 of this release may differ slightly from growth rates based on LFS aggregate estimates due to different methods of seasonal adjustment.

## 4 . General commentary

Productivity estimates are derived from estimates of labour inputs and economic outputs which are measured largely independently of one another. The buoyancy of the labour market has surprised many commentators and showed little sign of slowing in the first quarter. The number of recorded jobs grew by 2.4% in 2014, the fastest rate since 1989 and equivalent to average increases of 184 thousand jobs per quarter, while an additional 183 thousand jobs were added in the first quarter of 2015<sup>1</sup>. Within these broad totals, full-time jobs have been increasing faster than part-time jobs, and employee jobs have increased faster than self-employment. Indeed, LFS estimates show that self-employment fell by 1.5% in the year to the first quarter.

The resilience of jobs in manufacturing is noteworthy. Over the 30 years prior to the economic downturn in 2008-09, the number of manufacturing jobs fell by around 3% per year on average, as the economy re-orientated itself towards the service sector and large swathes of manufacturing production moved overseas. Over the 4 years 2011-14, jobs in manufacturing declined, but by only 0.3% per year on average or around a tenth of the pre-downturn trend.

Across the whole economy, average hours worked per job increased between 2010 and 2013 and have been fairly flat since then at around 31 hours per week, a level last seen in 2007. The increase in average hours has been particularly pronounced in construction, where average hours worked in 2014 was the highest since 2002 and around 2 hours a week higher than in 2012. Average hours worked have also increased in manufacturing, and this combined with very low rates of job losses noted above means that hours worked in manufacturing have been more or less flat since Q1 2009, following decades of declines.

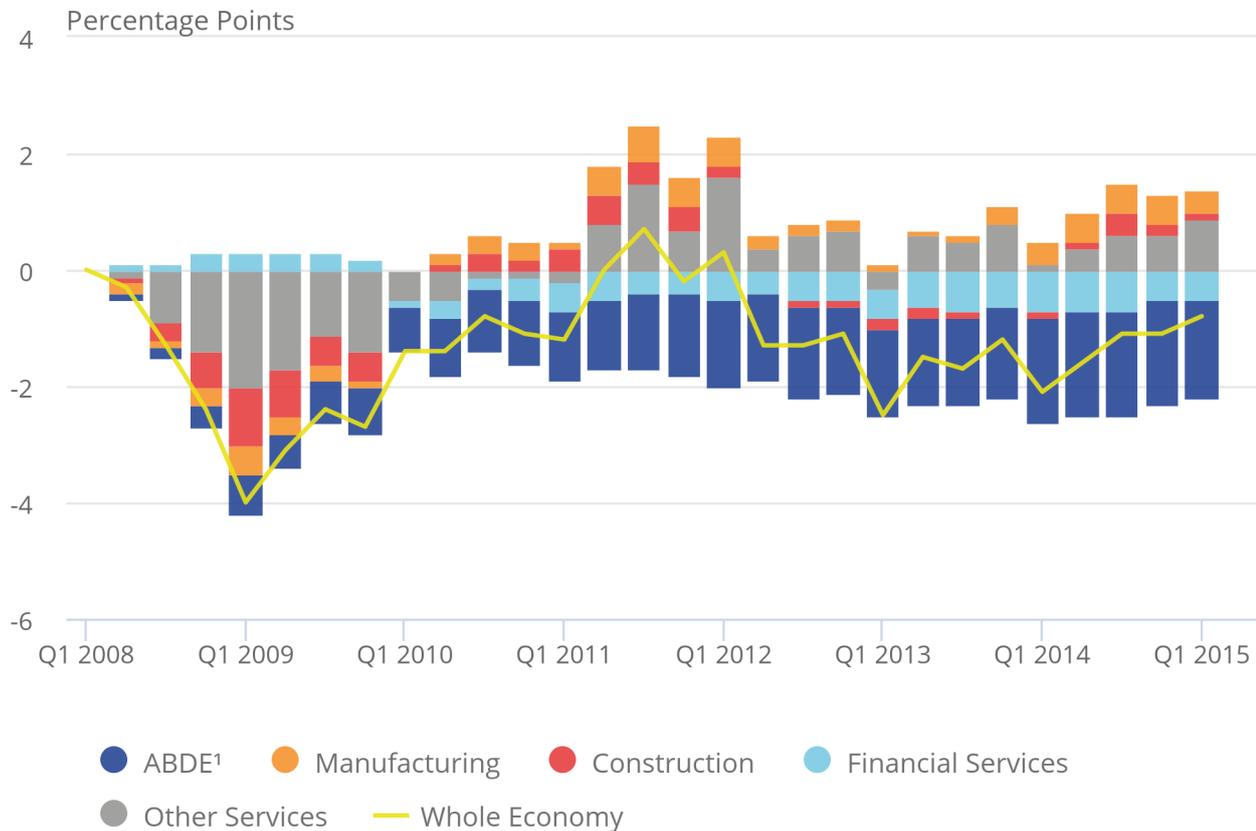
UK economic output is estimated to have increased at an average rate of around 0.7% per quarter since the start of 2013. Output of the production industries has grown a little below the whole economy figure, and output of market services has grown a little faster.

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

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

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

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



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)

The impact of measured movements in hours worked and economic output on productivity is summarised in Figure 1, which de-composes movements in output per hour since Q1 2008 in terms of cumulative quarterly changes. Output per hour was around 1% lower in Q1 2015 than in Q1 2008. This is entirely accounted for by industries ABDE (non-manufacturing production and agriculture) and by financial services.

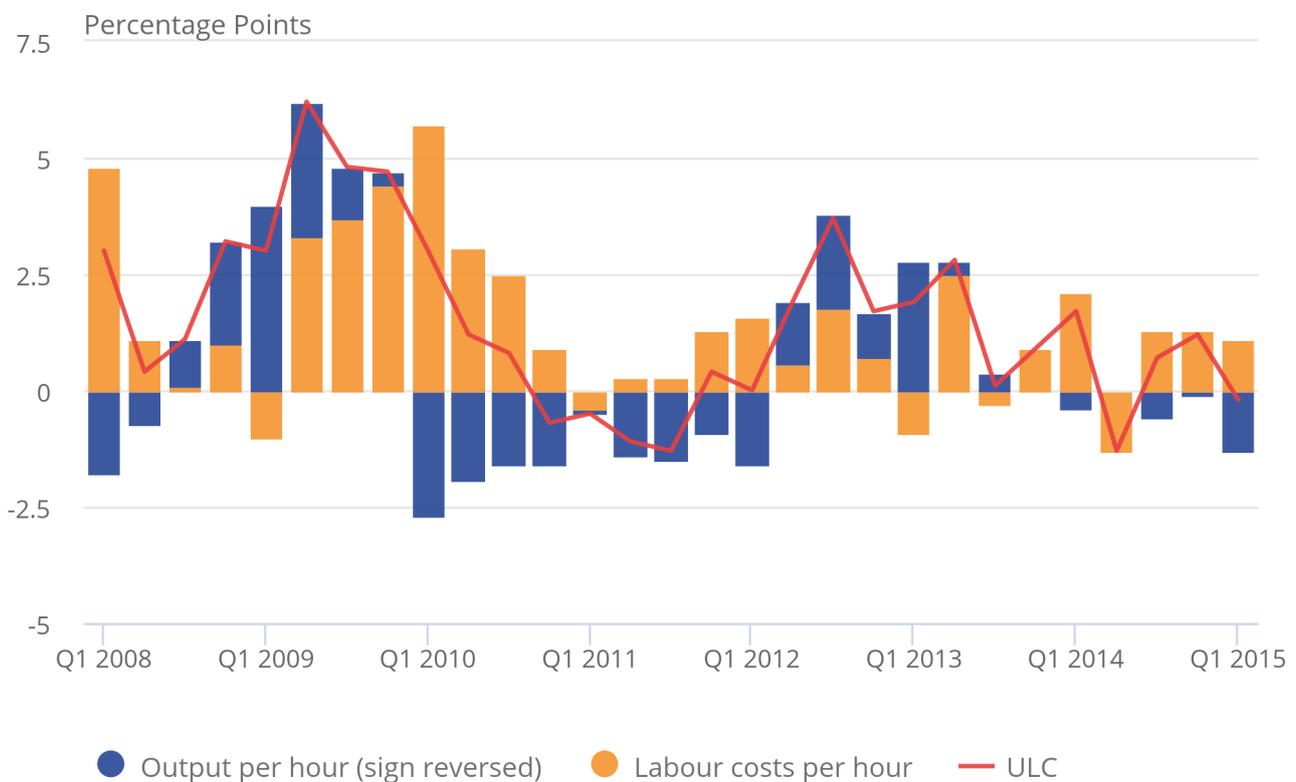
The weakness of productivity in these sectors (which can to some extent be rationalised in terms of resource depletion in the oil and gas extraction industry and increased regulation in financial services) should not detract from what is otherwise exceptionally weak productivity in other industries. Output per hour in services other than financial services has grown by around 0.2% per quarter since the bottom of the economic downturn in Q1 2009, compared with trend productivity growth of around 0.5% per quarter prior to the downturn. And output per hour in manufacturing has expanded at an average quarterly rate of around 0.3% since Q1 2009, compared with almost 1% per quarter prior to the downturn.

**Figure 2: Whole economy year on year changes to unit labour costs**

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

Figure 2: Whole economy year on year changes to unit labour costs

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



Source: Office for National Statistics

Figure 2 shows the progression of ULC changes since Q1 2008, with each period representing growth on the quarter from the prior year. The bars represent the decomposition of ULC changes into changes in total labour costs per hour and changes in output per hour, which has been reversed so a negative bar represents positive productivity growth.

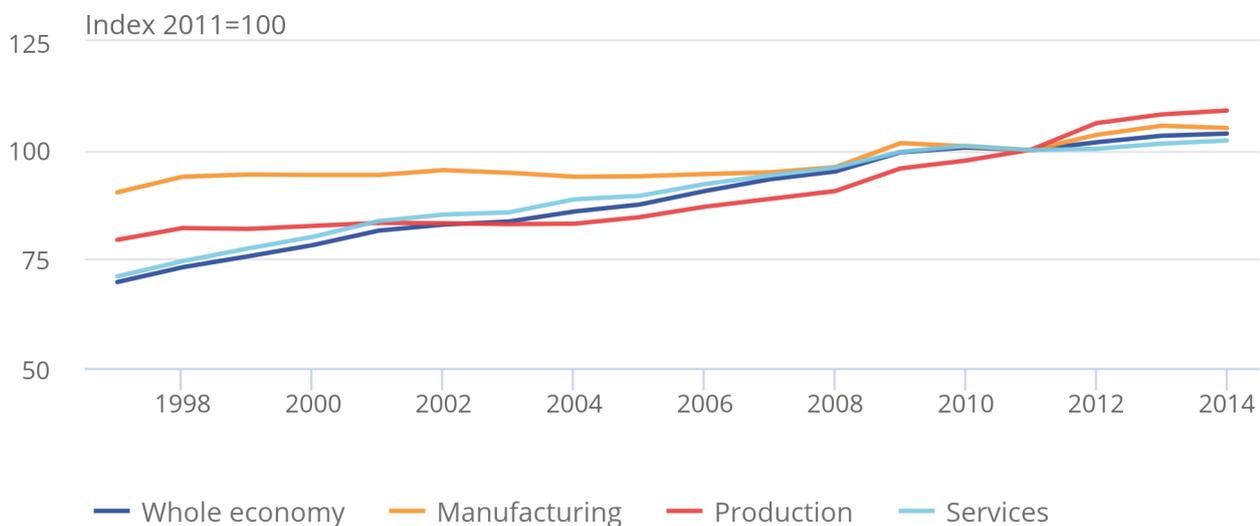
The growth of unit labour costs at the whole economy level remains subdued, as the upturn in growth of labour remuneration per hour (broader than, but correlated with, conventional measures of labour earnings such as average weekly earnings (AWE)) has broadly matched the gradual acceleration of labour productivity noted above. More recent data for the three months Feb-Apr 2015 indicate a further pick-up in AWE, but it is too early to say whether this will convert either into the broad labour remuneration concept used in compiling ULCs, or indeed whether this upturn could herald an upturn in productivity growth.

### Figure 3: Unit labour costs by broad industry

UK, 1997 to 2014

## Figure 3: Unit labour costs by broad industry

UK, 1997 to 2014



Source: Office for National Statistics

Figure 3 shows trends in ULCs by broad industry, based on experimental estimates available in a [Reference Table \(261.5 Kb Excel sheet\)](#) component of this release. Note that the manufacturing ULC series shown in Figure 3 differs in coverage and methodology from the manufacturing unit wage cost series shown in Table 2 of the pdf version of this release. Variation in ULC evolution by industry mainly reflects variation in productivity trends, as movements in labour remuneration tend to be closely correlated across industries. For example, since 2008 hourly labour remuneration has grown by around 2% per year in manufacturing and the broader production industries. Yet ULCs have grown faster in the production industries than in manufacturing, reflecting weak productivity in the non-manufacturing components.

### Notes for general commentary

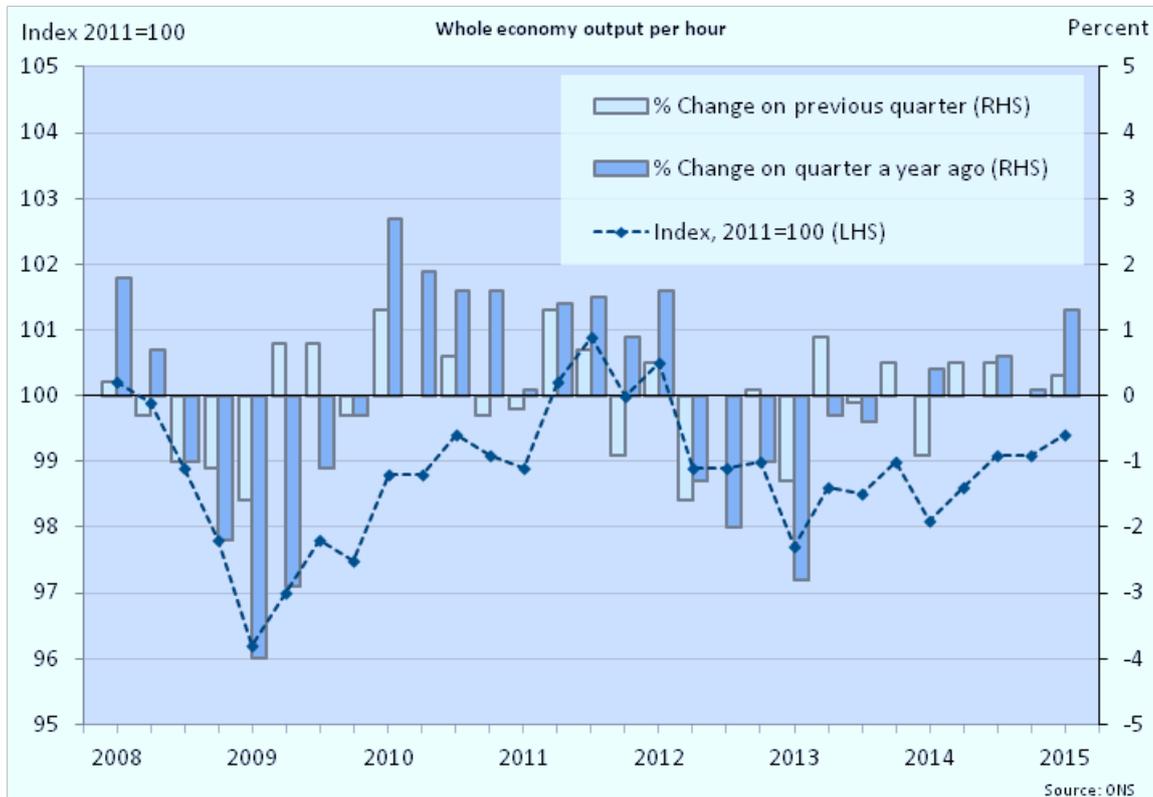
1. Employment growth in 2014 is likely to be revised up slightly when new population estimates are incorporated into the LFS estimates in early 2016.

## 5 . Whole economy labour productivity measures

The whole economy output per hour estimate for Q1 2015 continued a gradual upward trend, with an increase on the year and on the quarter (shown in figure 4). Output per hour is still below its Q1 2008 level and its post crisis peak in Q3 2011.

**Figure 4: Whole economy output per hour**

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



Productivity growth is stronger when considered on an output per job basis. This difference suggests those who are employed are working longer hours and this is reflected in the strong growth of hours relative to jobs and output since mid-2011 (see figure 5), though the difference has narrowed slightly in the latest quarter.

## Figure 5: Whole economy labour productivity components

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

### Figure 5: Whole economy labour productivity components

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



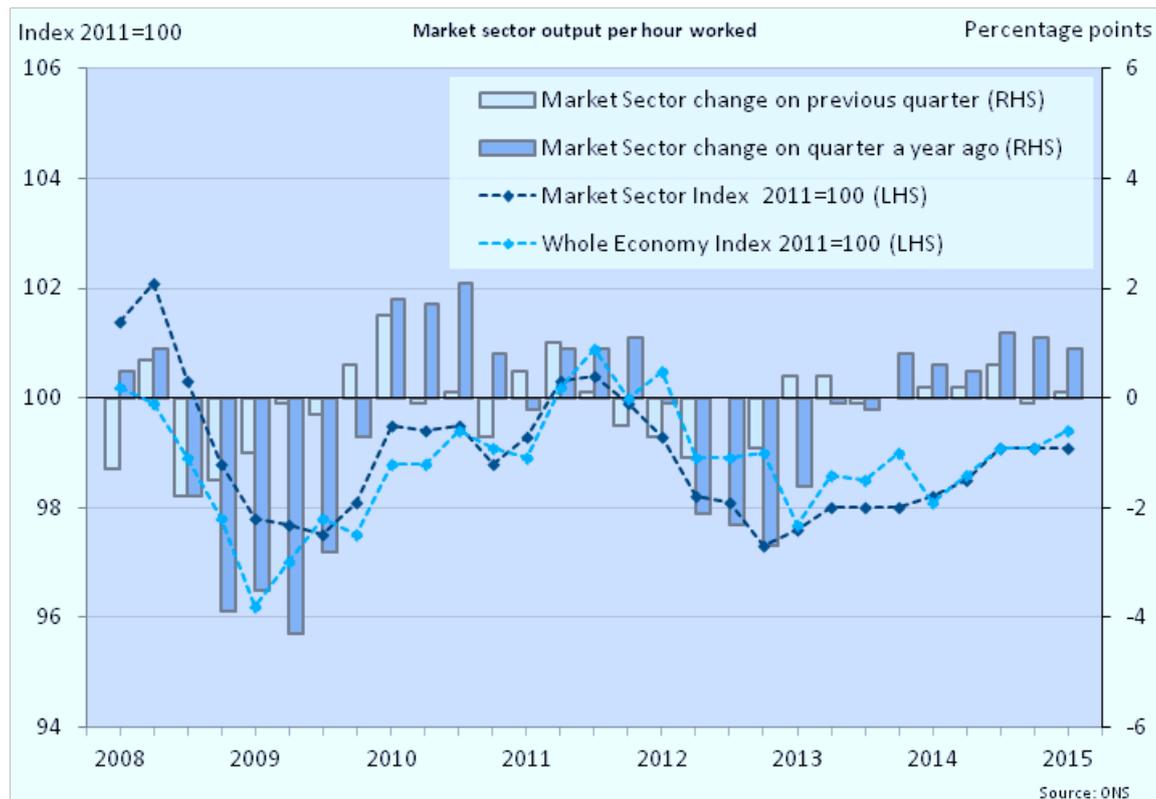
Source: Office for National Statistics

Quarter on quarter growth in market sector output per worker (not a National Statistic) has lagged that of the whole economy for the past two years. Yet the measure has grown faster than market sector output per hour (also not a National Statistic), suggesting that the market sector is following the same trend as the whole economy with workers putting in more hours.

On a per hour basis, market sector productivity has more closely tracked that of the whole economy over the past year (see figure 6).

**Figure 6: Market sector output per hour**

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



More information is available in [Reference Table LPROD01 \(362 Kb Excel sheet\)](#) and in the tables at the end of the pdf version of this statistical bulletin.

## 6 . Manufacturing labour productivity measures

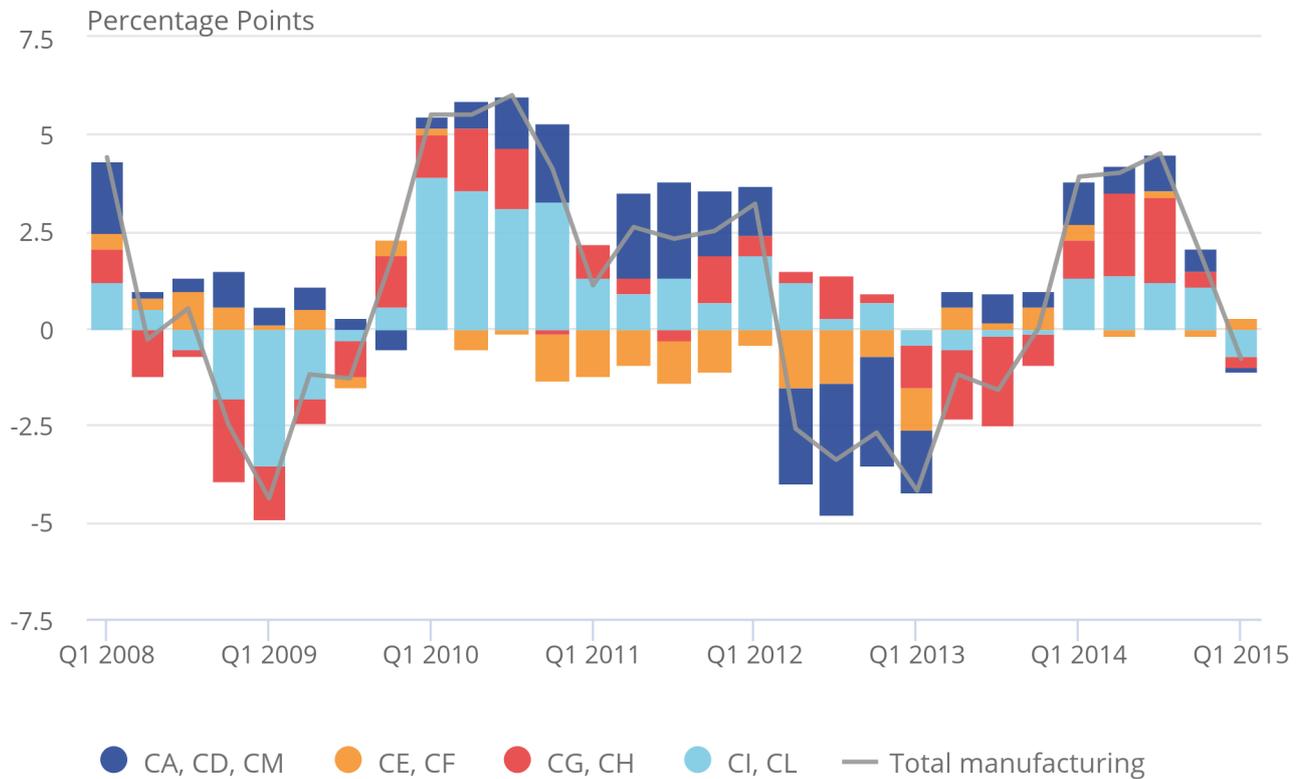
Manufacturing output per hour has fallen 0.8% in Q1 2015 compared to a year earlier as most industry groups (with the exception of the chemical and pharmaceutical industry, group 20-21) have moved from a positive productivity performance to a negative one (see figure 7).

## Figure 7: Contributions to growth of manufacturing output per hour

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

### Figure 7: Contributions to growth of manufacturing output per hour

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



Source: Office for National Statistics

#### Notes:

- 10-19 refers to Food products, beverages and tobacco (10-12), Textiles, wearing apparel & leather (13-15), Wood & paper products & printing (16-18) and Coke & refined petroleum products (19). 31-33 refers to Other Manufacturing
- 20-21 refers to Chemical and Pharmaceutical products
- 22-25 refers to Rubber, plastics & other non-metallic minerals (22-23), Basic metals and metal products (24-25)
- 26-30 refers to Computer products, Electrical equipment (26-27), Machinery & equipment (28) and Transport equipment (29-30)

In recent periods, the metals and non-metals industries (group 22-25) has seen the largest fall in output per hour from a year prior, though productivity in this industry has been relatively volatile for the past couple of years. The machinery and equipment industry group (which includes computer products, and electrical and transport equipment) performed relatively well after the initial downturn, but in the most recent quarter the group saw the largest fall in output per hour to the prior year.

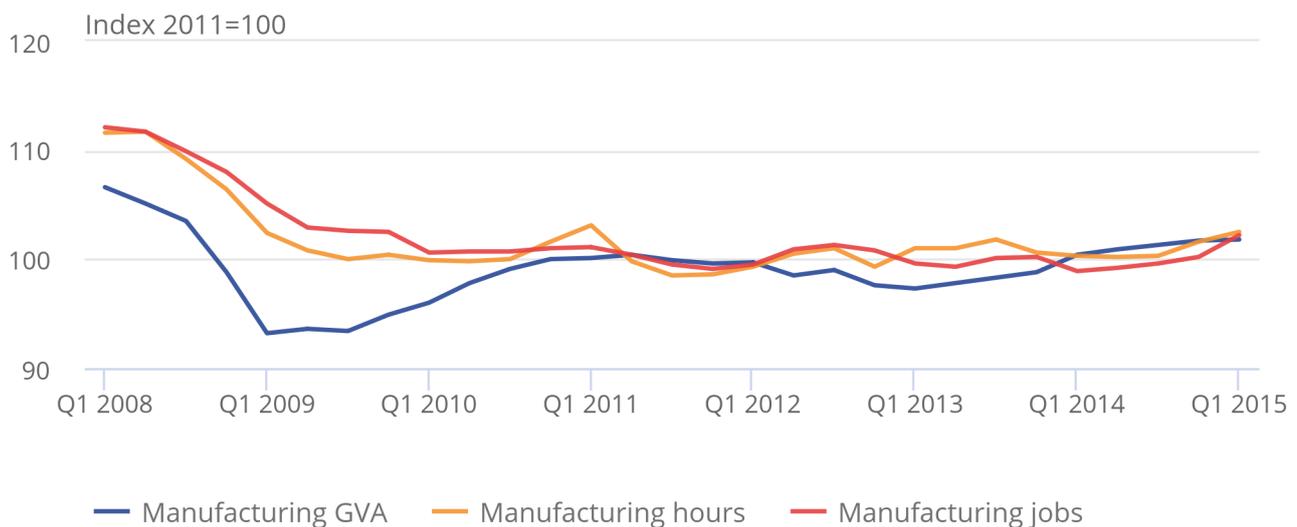
The overall fall in manufacturing productivity is down to labour inputs (in terms of hours and jobs) recently growing at a steady pace while GVA growth is flattening out, as shown in figure 8. GVA grew in 2013 after the post crisis recovery stumbled in 2011 and 2012, though growth has been slower since the start of 2014, while jobs growth (and more recently, hours growth) have picked up.

### Figure 8: Components of manufacturing productivity measures

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

## Figure 8: Components of manufacturing productivity measures

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



Source: Office for National Statistics

More information on the labour productivity of sub-divisions of manufacturing is available in [Reference Table LPROD01 \(362 Kb Excel sheet\)](#) (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 £ terms for the National Accounts base year of 2011. 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 £39.2k in Wood and paper products (divisions 16-18) to £134.4k in Chemicals & Pharmaceuticals (divisions 20-21). The average for the whole of manufacturing was £57.4k and the average for the whole economy was £47.2k in 2011.

Chemicals & Pharmaceuticals was also top of the distribution for output per hour in 2011 (£75.0), with Wood, paper products, & printing (divisions 16-18) at the bottom of the distribution (£21.6). On this basis the average for manufacturing as a whole was £31.0 and the average for the whole economy was £29.9 per hour.

## **7 . Services labour productivity measures**

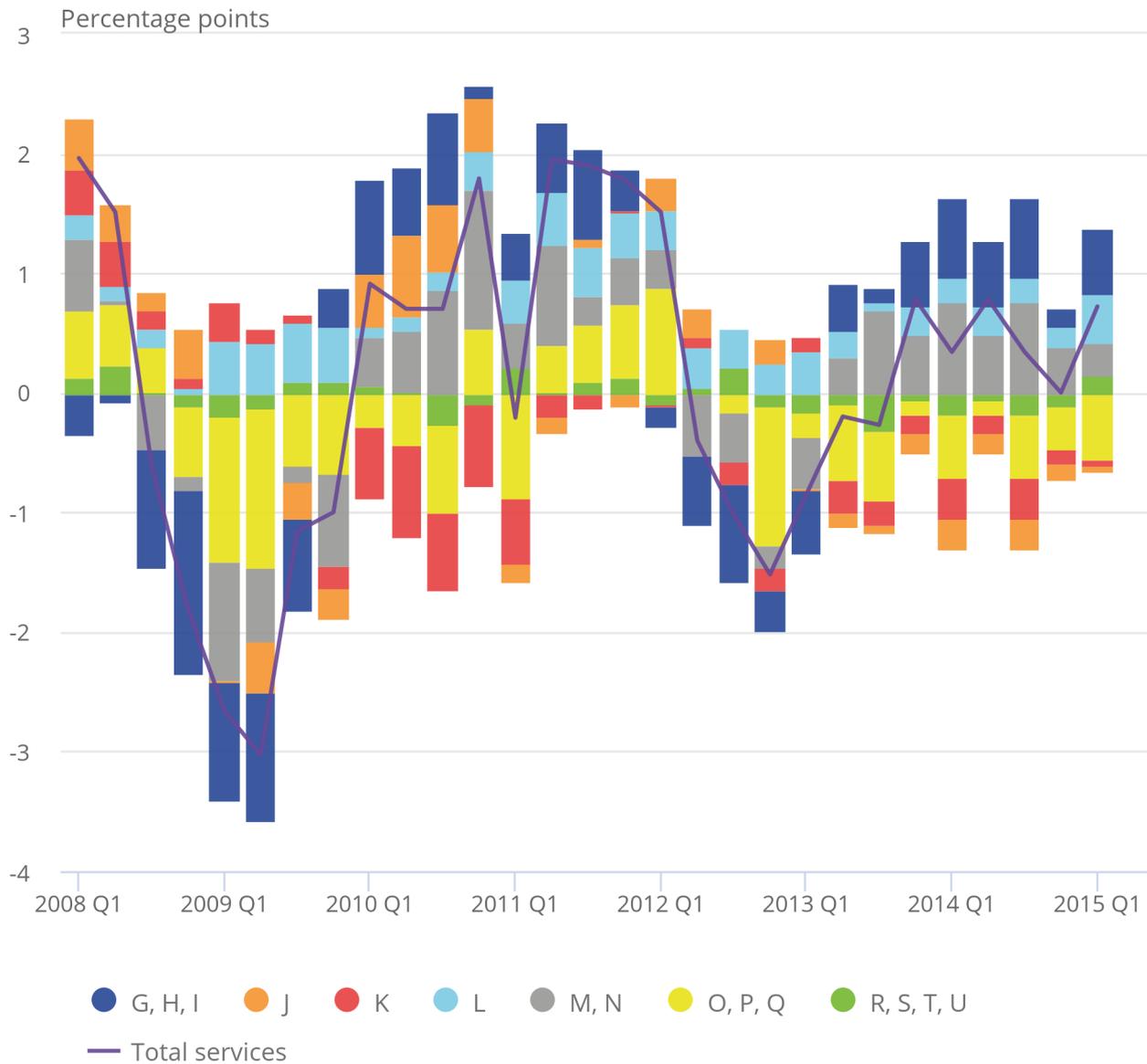
Services output per hour growth on the quarter from a year prior has remained positive since 2014 Q3, which is in contrast to six quarters of negative growth for this measure from Q2 2012 (see figure 9).

**Figure 9: Contributions to growth of services output per hour**

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

**Figure 9: Contributions to growth of services output per hour**

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



Source: Office for National Statistics

Notes:

1. G-I 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. M-N refers to Professional, scientific and technical activities (M), Administrative and support service activities (N)
6. O-Q refers to Government Services
7. R-U refers to Other Services

Productivity growth has returned to the government services industry (O-Q), while professional and admin services (M-N) returned negative productivity growth on a year prior in Q1, despite a positive performance in much of the post-crisis period. The retail industry has recently performed well in terms of output per hour from the previous year, recovering from four weak periods from 2012 Q2.

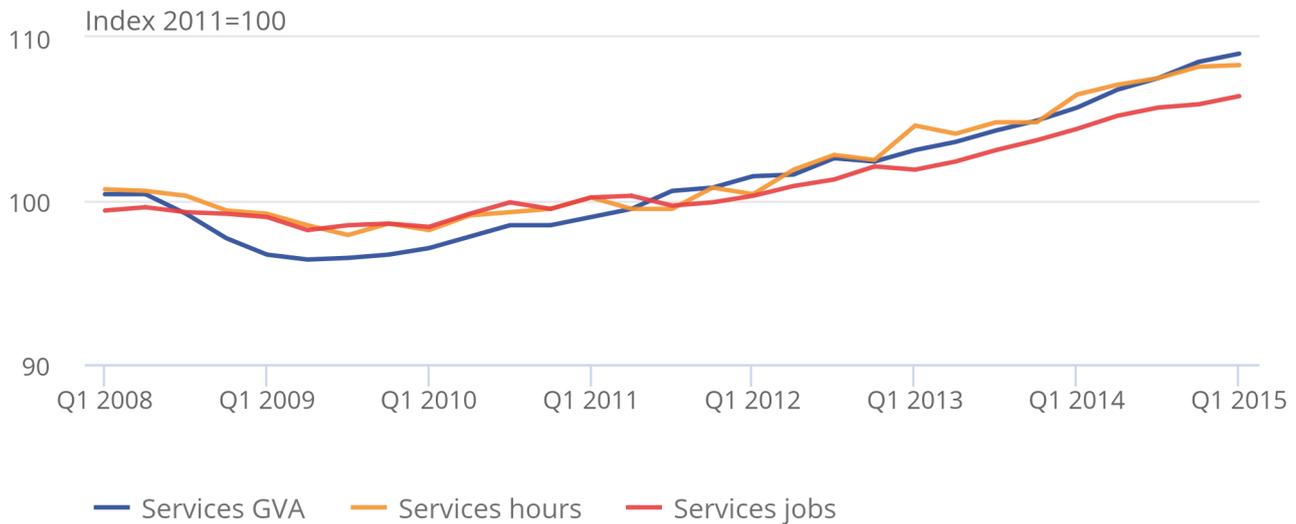
GVA has grown steadily since mid-2009 (see figure 10), while jobs have grown at a slower pace. This has resulted in stronger output per job growth to that of output per hour since Q4 2011.

## Figure 10: Components of services productivity measures

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

### Figure 10: Components of services productivity measures

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



Source: Office for National Statistics

More information on labour productivity of services industries is available in Tables 5 and 6 of [Reference Table LPROD01 \(362 Kb Excel sheet\)](#) and in the tables at the end of the pdf version of this statistical bulletin.

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. Yet, it should be borne in mind that labour productivity in industry L 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. Excluding this industry, output per job in 2011 varied from £21.6k in Accommodation & food services (section I) to £106.5k in Finance & 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 . Industry spotlight - information and communication services industry

The Information and communication services industry (industry J) consists of six divisions:

- Publishing activities (division 58)
- Motion picture, video and television programme production, sound recording and music publishing activities (59)
- Programming and broadcasting activities (60)
- Telecommunications (61)
- Computer programming, consultancy and related activities (62)
- Information service activities (63)

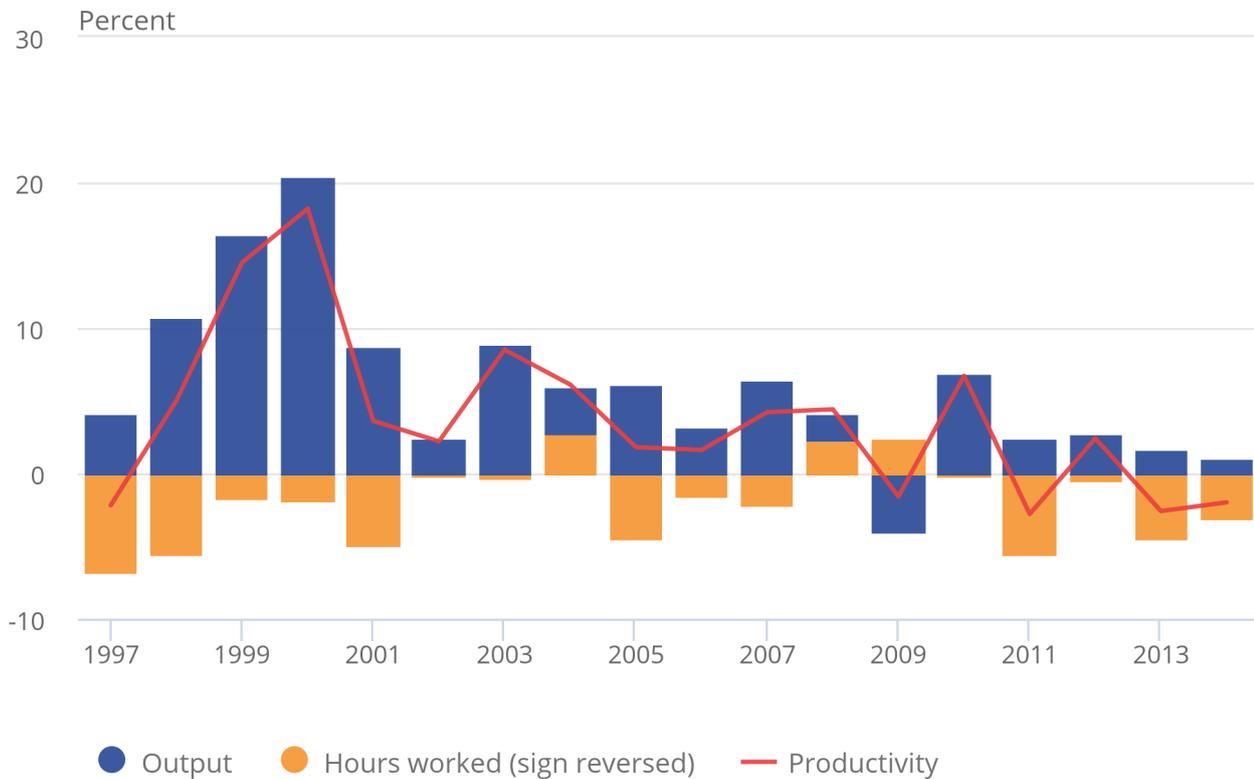
Annual output per hour for industry J saw a large boost in the late 1990s and early 2000s, driven by high output growth rates. Figure 11 shows this boost, with a decomposition of productivity into annual changes in output (represented by the lighter bars) and hours worked (the darker bars). The hours worked data are reversed, so a negative bar denotes an increase in hours worked, in order to show the effect changes have had on labour productivity.

## Figure 11: Information and communication services, output per hour

UK, 1997 to 2014

### Figure 11: Information and communication services, output per hour

UK, 1997 to 2014



Source: Office for National Statistics

Growth of output per hour for industry J has trended downwards since 2003, though it has been more volatile since 2009. The downward trend, in recent years, has been due to low output growth and annual increases in hours worked, which have kept productivity growth negative for three out of four quarters.

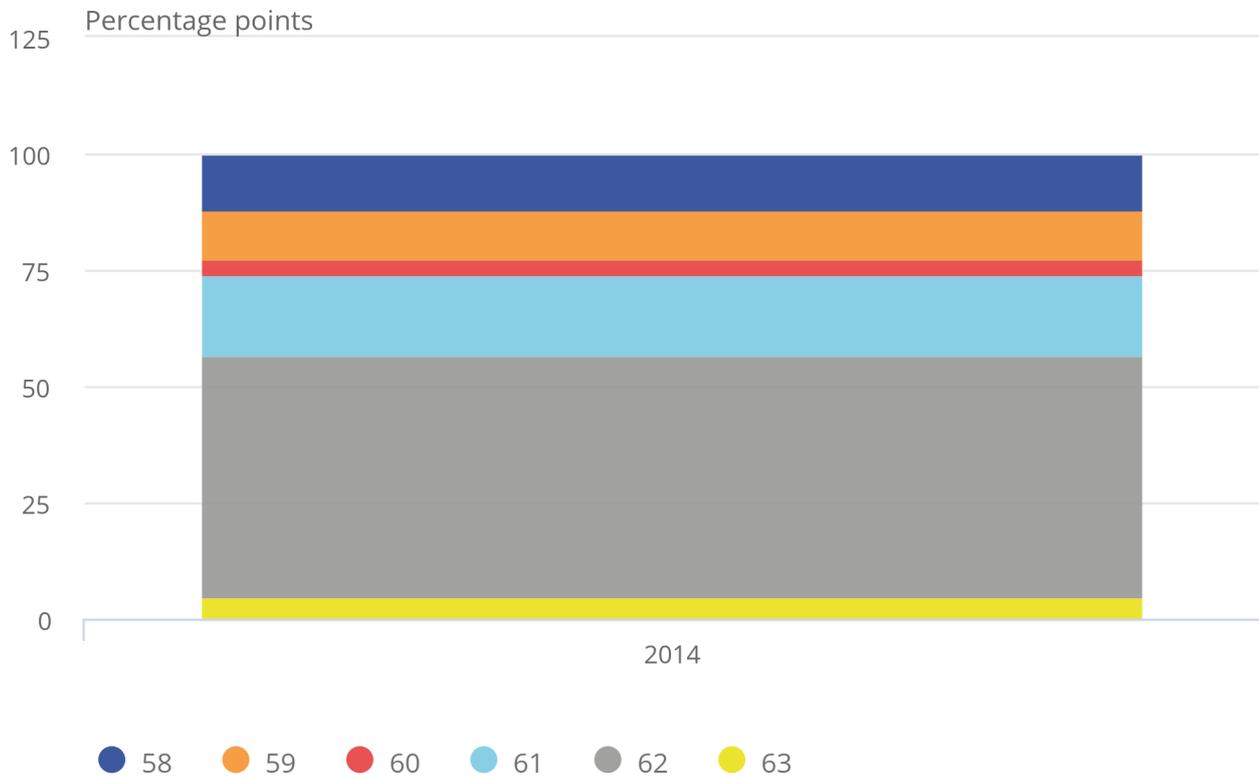
When looking at total hours worked for industry J, computer programming and consultancy (division 62) accounted for approximately 52% of the total in 2014 (see figure 12). Telecommunications was the second largest component, accounting for roughly 17% of total hours worked in 2014. The proportion of hours worked allocated to each division of industry J has stayed relatively stable over time, with computer programming and consultancy maintaining the largest share.

**Figure 12: Components of Industry J by hours worked**

UK, 2014

Figure 12: Components of Industry J by hours worked

UK, 2014



**Source: Office for National Statistics**

**Notes:**

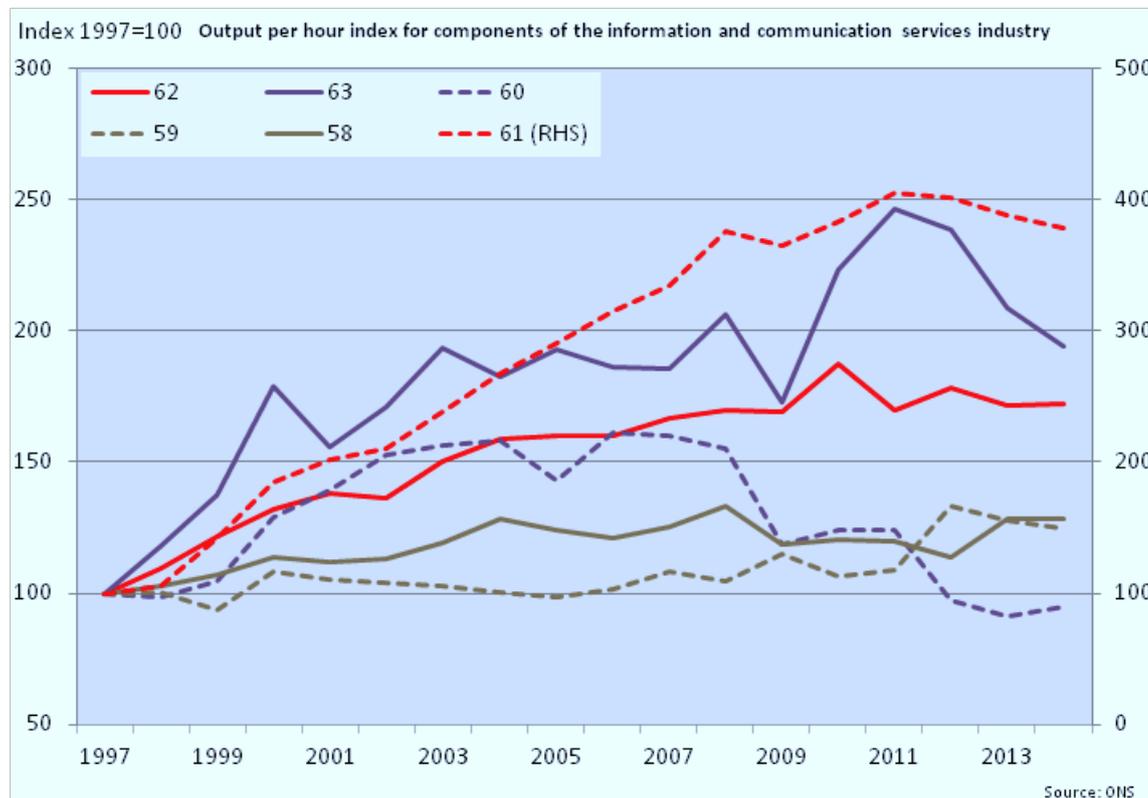
1. 58 refers to Publishing activities
2. 59 refers to Motion picture, video and television programme production, sound recording and music publishing activities
3. 60 refers to Programming and broadcasting activities
4. 61 refers to Telecommunications
5. 62 refers to Computer programming, consultancy and related activities
6. 63 refers to Information service activities

Output in industry J followed a similar trend, with computer programming and consultancy maintaining the largest share amongst the six components. It accounted for approximately 52% of total output in 2014. The second largest component, telecommunications, accounted for approximately 24% of the total.

Figure 13 shows indexed output per hour growth rates for the six components of industry J. Telecommunications is shown on the right hand scale, while all other divisions are represented on the left hand scale.

**Figure 13: Output per hour trends for the components of industry J**

UK, 1997 to 2014



The figure shows that telecommunications has outperformed industry J's other components in terms of output per hour by a significant margin. Productivity for telecommunications grew by about 13% a year, on average, from 1997 to 2008, and appeared to recover after a pro-cyclical dip in 2009. But output per hour then fell in each of 2012, 2013 and 2014.

Output per hour for computer programming and consultancy, the largest division of industry J, grew by 5% a year, on average, from 1997 to 2008, but since 2008 its performance has been relatively flat.

## Notes for Industry spotlight - information and communication services industry

1. This section of the bulletin was researched and drafted by Azhar Iqbal, a member of the Knowledge Economy & Productivity team at ONS.

## 9 . Revisions

The Revisions table in [Reference Table LPROD01 \(362 Kb Excel sheet\)](#) shows revisions to growth rates of the main productivity estimates for the whole economy and selected sub-industries between this release and the previous release on 1 April 2015.

On the output side, GVA estimates have been revised back to Q1 2014, including revisions to construction estimates arising from the introduction of [an interim solution for construction price indices](#). Compared with the last Labour Productivity release on 1 April 2015, quarterly construction GVA has been revised upwards by up to 4.2% on a quarterly basis, and by 1.9% in 2014. GVA as a whole has been revised up by 0.2% in 2014.

On the input side revisions reflect the outcome of the periodic review of seasonal adjustment parameters applied to jobs and hours estimates. This has had only a limited impact on jobs. But the review of hours has also introduced adjustments to align the LFS 13-week sampling frame with calendar quarters. This has led to extensive changes to seasonally adjusted hours estimates, even where seasonally adjusted jobs estimates are unchanged. This process also introduces material differences between calendar year averages of seasonally adjusted quarterly estimates and their non-seasonally adjusted (NSA) counterparts. For example, NSA total hours worked are estimated to have grown by 2.0% in 2012 and by 1.8% in 2013, while the new seasonally adjusted series shows growth of 1.4% in 2012 and 2.4% in 2013. Differences between NSA and seasonally adjusted calendar year totals are also a feature of the published LFS aggregate hours series. But users should note that differences at the aggregate level between hours estimates used in this release and the LFS published aggregate are somewhat larger than in recent editions of this release.

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

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 Q2 2007 and Q1 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, and these can be compared with the value of the estimates in the latest quarter, shown in the second column. Additional information on revisions to these and other statistics published in this release is available in the [Revisions Triangles](#) (1.69 Mb Excel sheet) component of this release.

**Table A: Revisions**

Revisions between first publication and estimates five years later (2007 Q2 - 2012 Q1)			
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	1	0	0.9
Output per job	0.9	0	0.8
Output per hour	1.3	0	0.7
Unit labour costs	0.9	0	1.3
Unit wage costs	2.2	-0.2	1.2

This revisions analysis shows that whole economy labour productivity growth estimates have tended to be unrevised over time (on a year-on-year basis). Unit labour costs have also been unrevised, while unit wage costs have tended to be revised down by 0.2 percentage points. Were the average revisions to apply to the current release, growth of output per hour in the year to the first quarter of 2015 would be unrevised at 1.3% over the next three years. Growth of unit labour costs would also be unrevised from 0.9%, while growth of unit wage costs would be revised from 2.2% to 2.0% over the same period.

## 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 2011=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

ONS published [Productivity measures and analysis: ONS work plan](#) (241 Kb Word document) in February 2015, reviewing developments since the last productivity workplan was published in 2006 and setting out priorities for future work. Although this was not a formal consultation document, ONS welcomes feedback from users, which can be sent to [productivity@ons.gsi.gov.uk](mailto:productivity@ons.gsi.gov.uk).

In 2012 ONS developed new and improved measures of labour input as part of ongoing work to comply with EU regulations. Specifically, these new measures provide an industry breakdown of employment (i.e. on a headcount basis rather than a job basis), and provide a split between employees and the self-employed. For methodological consistency, this work has also made some changes to the computation of corresponding hours series. These series are currently available on the Eurostat website and ONS has published an article entitled [Introducing New Labour Productivity Statistics](#) which describes these new series.

In response to user requests, ONS has now published selected estimates of labour productivity using the new and improved estimates of labour inputs, together with comparisons against the corresponding estimates from the existing productivity system. These are available as an additional reference table component (table NEWLPROD01) of the aforementioned article.

#### 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 hosted a half-day workshop for users of productivity statistics in London on 4 February 2015. Presentation slides and a note of the workshop are available [here](#). If you are interested in attending future workshops or if you have any comments on this release please email [Productivity@ons.gsi.gov.uk](mailto:Productivity@ons.gsi.gov.uk).

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](mailto: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](http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html) or from the Media Relations Office email: [media.relations@ons.gsi.gov.uk](mailto:media.relations@ons.gsi.gov.uk)

These National Statistics are produced to high professional standards and released according to the arrangements approved by the UK Statistics Authority.

# 1 Labour productivity key measures

United Kingdom

Seasonally adjusted (2011=100)

Section	Whole economy			Production		Manufacturing		Services	
	Output per worker	Output per job	Output per hour						
	A-U	A-U	A-U	B-E	B-E	C	C	G-U	G-U
<b>Indices</b>	A4YM	LNNN	LZVB	DJ4M	DJK3	DJ4P	DJK6	DJE3	DJP9
2011	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2012	99.6	99.7	99.3 <sup>†</sup>	96.2	96.9 <sup>†</sup>	98.1	98.7 <sup>†</sup>	100.9	100.2 <sup>†</sup>
2013	100.0	100.1	98.5	96.2	94.8	98.3 <sup>†</sup>	97.0	101.2	99.4
2014	100.6 <sup>†</sup>	100.7 <sup>†</sup>	98.7	98.2 <sup>†</sup>	97.0	101.6	100.4	101.7 <sup>†</sup>	99.8
2011 Q2	99.4	99.5 <sup>†</sup>	100.2 <sup>†</sup>	99.7	100.3 <sup>†</sup>	100.0	100.6 <sup>†</sup>	99.3 <sup>†</sup>	100.0 <sup>†</sup>
Q3	100.8	100.7	100.9	100.2	101.2	100.5 <sup>†</sup>	101.4	100.9	101.1
Q4	100.6	100.6	100.0	100.0 <sup>†</sup>	100.1	100.5	100.9	101.0	100.1
2012 Q1	100.3	100.4	100.5	98.6	99.0	100.2	100.4	101.2	101.1
Q2	99.4	99.5	98.9	96.1	96.6	97.7	98.0	100.7	99.7
Q3	99.8	99.9	98.9	95.5	95.7	97.8	98.0	101.3	99.9
Q4	98.9	99.0	99.0	94.5	96.2	96.8	98.2	100.3	100.0
2013 Q1	99.7	100.0	97.7	95.4	93.8	97.7	96.3	101.2	98.6
Q2	100.0	100.1	98.6	96.4	94.8	98.5	96.8	101.2	99.5
Q3	100.2	100.2	98.5	96.4	94.6	98.2	96.5	101.2	99.5
Q4	99.9	99.9	99.0	96.5	96.1	98.6	98.3	101.2	100.1
2014 Q1	100.0	100.2	98.1	98.3	96.8	101.5	100.0	101.3	99.3
Q2	100.4	100.4	98.6	98.4	97.4	101.8	100.7	101.4	99.7
Q3	100.8 <sup>†</sup>	100.7	99.1	98.1	97.4	101.7	100.9	101.8	100.0
Q4	101.3	101.3	99.1	98.0	96.5	101.5	100.1	102.4	100.3
2015 Q1	101.0	101.1	99.4	96.1	96.0	99.6	99.2	102.4	100.6
<b>Per cent change on quarter a year ago</b>	A4YN	LNNP	LZVD	DJ4O	DJK5	DJ4R	DJK8	DJE5	DJQ3
2011 Q2	0.6	0.7 <sup>†</sup>	1.4 <sup>†</sup>	-1.1	-1.4 <sup>†</sup>	3.0	2.7 <sup>†</sup>	0.8 <sup>†</sup>	1.3 <sup>†</sup>
Q3	1.9	1.7	1.5	-0.5 <sup>†</sup>	-0.5	2.1 <sup>†</sup>	2.3	2.3	1.9
Q4	1.5	1.4	0.9	-1.5	-1.1	1.5	2.6	2.0	1.1
2012 Q1	1.1	1.2	1.6	-1.5	0.5	1.1	3.4	2.4	2.3
Q2	-	-	-1.3	-3.6	-3.7	-2.3	-2.6	1.4	-0.3
Q3	-1.0	-0.8	-2.0	-4.7	-5.4	-2.7	-3.4	0.4	-1.2
Q4	-1.7	-1.6	-1.0	-5.5	-3.9	-3.7	-2.7	-0.7	-0.1
2013 Q1	-0.6	-0.4	-2.8	-3.2	-5.3	-2.5	-4.1	-	-2.5
Q2	0.6	0.6	-0.3	0.3	-1.9	0.8	-1.2	0.5	-0.2
Q3	0.4	0.3	-0.4	0.9	-1.1	0.4	-1.5	-0.1	-0.4
Q4	1.0	0.9	-	2.1	-0.1	1.9	0.1	0.9	0.1
2014 Q1	0.3	0.2	0.4	3.0	3.2	3.9	3.8	0.1	0.7
Q2	0.4	0.3	-	2.1	2.7	3.4	4.0	0.2	0.2
Q3	0.6 <sup>†</sup>	0.5	0.6	1.8	3.0	3.6	4.6	0.6	0.5
Q4	1.4	1.4	0.1	1.6	0.4	2.9	1.8	1.2	0.2
2015 Q1	1.0	0.9	1.3	-2.2	-0.8	-1.9	-0.8	1.1	1.3
<b>Per cent change on previous quarter</b>	A4YO	DMWR	TXBB	DJ4N	DJK4	DJ4Q	DJK7	DJE4	DJQ2
2011 Q2	0.2	0.3 <sup>†</sup>	1.3	-0.4	1.8 <sup>†</sup>	0.9 <sup>†</sup>	3.6 <sup>†</sup>	0.5 <sup>†</sup>	1.2 <sup>†</sup>
Q3	1.4	1.2	0.7 <sup>†</sup>	0.5	0.9	0.5	0.8	1.6	1.1
Q4	-0.2	-0.1	-0.9	-0.2 <sup>†</sup>	-1.1	-	-0.5	0.1	-1.0
2012 Q1	-0.3	-0.2	0.5	-1.4	-1.1	-0.3	-0.5	0.2	1.0
Q2	-0.9	-0.9	-1.6	-2.5	-2.4	-2.5	-2.4	-0.5	-1.4
Q3	0.4	0.4	-	-0.6	-0.9	0.1	-	0.6	0.2
Q4	-0.9	-0.9	0.1	-1.0	0.5	-1.0	0.2	-1.0	0.1
2013 Q1	0.8	1.0	-1.3	1.0	-2.5	0.9	-1.9	0.9	-1.4
Q2	0.3	0.1	0.9	1.0	1.1	0.8	0.5	-	0.9
Q3	0.2	0.1	-0.1	-	-0.2	-0.3	-0.3	-	-
Q4	-0.3	-0.3	0.5	0.1	1.6	0.4	1.9	-	0.6
2014 Q1	0.1	0.3	-0.9	1.9	0.7	2.9	1.7	0.1	-0.8
Q2	0.4	0.2	0.5	0.1	0.6	0.3	0.7	0.1	0.4
Q3	0.4 <sup>†</sup>	0.3	0.5	-0.3	-	-0.1	0.2	0.4	0.3
Q4	0.5	0.6	-	-0.1	-0.9	-0.2	-0.8	0.6	0.3
2015 Q1	-0.3	-0.2	0.3	-1.9	-0.5	-1.9	-0.9	-	0.3

<sup>†</sup>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 (2011=100)

Section	Whole economy		Manufacturing
	Unit labour costs	Unit wage costs	Unit wage costs
	A-U	A-U	C
<b>Indices</b>			
	LNNL	LNNK	DIX4
2011	100.0	100.0	100.0
2012	101.7	101.5	103.8
2013	103.2	102.7	106.0
2014	103.8 <sup>†</sup>	104.2 <sup>†</sup>	104.6 <sup>†</sup>
2011 Q2	100.0	100.3	99.4
Q3	99.5	99.8	99.9
Q4	100.4	99.7	100.1 <sup>†</sup>
2012 Q1	100.3	98.5	100.4
Q2	101.4	101.8	104.3
Q3	102.8	102.7	104.7
Q4	102.4	102.8	105.8
2013 Q1	101.8	101.2	105.0
Q2	104.0	103.3	106.2
Q3	103.4	102.9	106.2
Q4	103.6	103.2	106.6
2014 Q1	102.9 <sup>†</sup>	102.9 <sup>†</sup>	104.3
Q2	103.6	104.2	104.4
Q3	104.1	104.5	104.4
Q4	104.4	105.3	105.2
2015 Q1	103.8	105.1	107.0
<b>Per cent change on quarter a year ago</b>			
	DMWN	LOJE	DJ4J
2011 Q2	-0.8	-0.4	-1.2 <sup>†</sup>
Q3	-1.1	-1.0	-0.5
Q4	0.1	-0.7	-0.1
2012 Q1	0.2	-1.6	-0.3
Q2	1.3	1.5	4.9
Q3	3.4	2.9	4.8
Q4	2.0	3.1	5.7
2013 Q1	1.5	2.7	4.6
Q2	2.6	1.5	1.8
Q3	0.5	0.2	1.4
Q4	1.1	0.4	0.8
2014 Q1	1.0 <sup>†</sup>	1.6 <sup>†</sup>	-0.7
Q2	-0.4	0.8	-1.7
Q3	0.7	1.5	-1.7
Q4	0.8	2.0	-1.3
2015 Q1	0.9	2.2	2.6
<b>Per cent change on previous quarter</b>			
	DMWO	DMWL	DJ4I
2011 Q2	-	0.1	-1.3
Q3	-0.6	-0.4	0.5
Q4	1.0	-0.1	0.2 <sup>†</sup>
2012 Q1	-0.1	-1.2	0.3
Q2	1.1	3.3	3.9
Q3	1.4	0.9	0.4
Q4	-0.4	0.1	1.1
2013 Q1	-0.6	-1.5	-0.8
Q2	2.1	2.1	1.1
Q3	-0.6	-0.4	-
Q4	0.1	0.3	0.4
2014 Q1	-0.6 <sup>†</sup>	-0.3 <sup>†</sup>	-2.2
Q2	0.6	1.3	0.1
Q3	0.5	0.3	-
Q4	0.2	0.8	0.8
2015 Q1	-0.6	-0.2	1.7

<sup>†</sup> 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 (2011=100)

	Food, beverages & tobacco	Textiles, wearing apparel & leather	Wood & paper products, & printing	Chemicals, Pharmaceuticals	Rubber, plastics & non-metallic minerals	Basic metals & metal products	Computer etc products, Electrical equipment	Machinery & equipment	Transport equipment	Coke & refined petroleum, Other manufacturing
Divisions	10-12	13-15	16-18	20-21	22-23	24-25	26-27	28	29-30	19,31-33
<b>Level (£k)</b>										
2011	51.0	45.2	39.2	134.4	44.0	41.6	61.7	56.9	80.8	54.0
<b>Indices</b>										
	DJ54	DJ57	DJ5F	DJ5I	DJ5L	DJB2	DJB7	DJC2	DJC5	DJD3
2011	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2012	99.4	89.5	100.7 <sup>†</sup>	92.2	96.9	102.5	106.6	98.2 <sup>†</sup>	102.1	86.3 <sup>†</sup>
2013	97.1 <sup>†</sup>	84.4	104.8	94.5	97.3	99.9	102.8	86.7	109.6	90.6
2014	100.5	82.2 <sup>†</sup>	106.8	96.5 <sup>†</sup>	109.0 <sup>†</sup>	102.0 <sup>†</sup>	105.1 <sup>†</sup>	93.4	113.3 <sup>†</sup>	92.9
2011 Q2	100.8	100.4	98.8 <sup>†</sup>	102.5	98.5	99.8	100.9	97.7 <sup>†</sup>	97.8	102.0 <sup>†</sup>
Q3	99.8	104.0	103.6	98.4	100.7	98.4	99.9	102.2	100.1	100.5
Q4	100.0	100.7	102.3	95.5	100.8	99.8	97.2	103.1	104.5	100.9
2012 Q1	99.6	92.4	106.9	96.5	96.6 <sup>†</sup>	101.9	104.1	100.2	102.4	93.8
Q2	99.7	87.9	98.2	90.5	97.6	102.3	106.2	99.4	100.8	86.8
Q3	99.9	87.8	98.2	91.9	96.7	105.2	107.9	97.1	102.2	83.5
Q4	98.3 <sup>†</sup>	89.8	99.3	90.0	96.8	100.4	108.1	95.9	103.1	80.9
2013 Q1	97.3	89.6	102.3	91.0	98.0	99.4	106.4	85.3	109.4	87.7
Q2	98.1	84.8	105.7	99.3	93.9	98.1	105.7	85.2	108.9	89.3
Q3	96.1	82.9	106.2	92.8	96.5	99.8	100.4	87.9	110.1	93.4
Q4	96.7	80.3	104.8	94.7	100.9	102.4	98.6	88.5	110.1	92.0
2014 Q1	100.9	83.2 <sup>†</sup>	106.2	96.5 <sup>†</sup>	108.2	102.8 <sup>†</sup>	103.7 <sup>†</sup>	92.8	112.1 <sup>†</sup>	94.4
Q2	100.8	85.4	106.1	95.2	110.3	101.3	106.4	94.3	113.4	92.0
Q3	100.7	79.2	107.7	96.9	111.1	101.6	105.7	94.0	111.9	92.9
Q4	99.7	81.0	107.3	97.5	106.5	102.3	104.4	92.3	115.6	92.1
2015 Q1	97.6	82.5	108.1	97.5	105.3	104.2	91.8	84.5	117.0	89.2
<b>Per cent change on quarter a year ago</b>										
	DJ56	DJ5E	DJ5H	DJ5K	DJ5N	DJB6	DJB9	DJC4	DJD2	DJD7
2011 Q2	10.2	10.8	-7.6	-4.7	-2.9	2.7	-4.4	2.3 <sup>†</sup>	12.2	11.7
Q3	6.9	13.3	2.7	-10.3	-1.0	-3.2	-4.1	3.5	11.8	6.6 <sup>†</sup>
Q4	2.1	12.6	3.6 <sup>†</sup>	-10.5	1.9 <sup>†</sup>	-3.2	-3.7	-0.3	10.2	7.8
2012 Q1	0.2	-2.6	12.2	-6.9	-3.4	-0.1	2.1	3.2	4.8	-2.8
Q2	-1.1	-12.5	-0.6	-11.7	-0.9	2.5	5.3	1.7	3.1	-14.9
Q3	0.1	-15.6	-5.2	-6.6	-4.0	6.9	8.0	-5.0	2.1	-16.9
Q4	-1.7 <sup>†</sup>	-10.8	-2.9	-5.8	-4.0	0.6	11.2	-7.0	-1.3	-19.8
2013 Q1	-2.3	-3.0	-4.3	-5.7	1.4	-2.5	2.2	-14.9	6.8	-6.5
Q2	-1.6	-3.5	7.6	9.7	-3.8	-4.1	-0.5	-14.3	8.0	2.9
Q3	-3.8	-5.6	8.1	1.0	-0.2	-5.1	-7.0	-9.5	7.7	11.9
Q4	-1.6	-10.6	5.5	5.2	4.2	2.0	-8.8	-7.7	6.8	13.7
2014 Q1	3.7	-7.1 <sup>†</sup>	3.8	6.0 <sup>†</sup>	10.4	3.4 <sup>†</sup>	-2.5 <sup>†</sup>	8.8	2.5 <sup>†</sup>	7.6
Q2	2.8	0.7	0.4	-4.1	17.5	3.3	0.7	10.7	4.1	3.0
Q3	4.8	-4.5	1.4	4.4	15.1	1.8	5.3	6.9	1.6	-0.5
Q4	3.1	0.9	2.4	3.0	5.6	-0.1	5.9	4.3	5.0	0.1
2015 Q1	-3.3	-0.8	1.8	1.0	-2.7	1.4	-11.5	-8.9	4.4	-5.5
<b>Per cent change on previous quarter</b>										
	DJ55	DJ58	DJ5G	DJ5J	DJ5M	DJB3	DJB8	DJC3	DJC6	DJD4
2011 Q2	1.4	5.8	3.7	-1.1	-1.5 <sup>†</sup>	-2.2	-1.1	0.6 <sup>†</sup>	0.1	5.7 <sup>†</sup>
Q3	-1.0	3.6	4.9	-4.0	2.2	-1.4	-1.0	4.6	2.4	-1.5
Q4	0.2	-3.2	-1.3 <sup>†</sup>	-2.9	0.1	1.4	-2.7	0.9	4.4	0.4
2012 Q1	-0.4	-8.2	4.5	1.0	-4.2	2.1	7.1	-2.8	-2.0	-7.0
Q2	0.1	-4.9	-8.1	-6.2	1.0	0.4	2.0	-0.8	-1.6	-7.5
Q3	0.2	-0.1	-	1.5	-0.9	2.8	1.6	-2.3	1.4	-3.8
Q4	-1.6 <sup>†</sup>	2.3	1.1	-2.1	0.1	-4.6	0.2	-1.2	0.9	-3.1
2013 Q1	-1.0	-0.2	3.0	1.1	1.2	-1.0	-1.6	-11.1	6.1	8.4
Q2	0.8	-5.4	3.3	9.1	-4.2	-1.3	-0.7	-0.1	-0.5	1.8
Q3	-2.0	-2.2	0.5	-6.5	2.8	1.7	-5.0	3.2	1.1	4.6
Q4	0.6	-3.1	-1.3	2.0	4.6	2.6	-1.8	0.7	-	-1.5
2014 Q1	4.3	3.6 <sup>†</sup>	1.3	1.9 <sup>†</sup>	7.2	0.4 <sup>†</sup>	5.2 <sup>†</sup>	4.9	1.8 <sup>†</sup>	2.6
Q2	-0.1	2.6	-0.1	-1.3	1.9	-1.5	2.6	1.6	1.2	-2.5
Q3	-0.1	-7.3	1.5	1.8	0.7	0.3	-0.7	-0.3	-1.3	1.0
Q4	-1.0	2.3	-0.4	0.6	-4.1	0.7	-1.2	-1.8	3.3	-0.9
2015 Q1	-2.1	1.9	0.7	-	-1.1	1.9	-12.1	-8.5	1.2	-3.1

<sup>†</sup> 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 (2011=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
<b>Level (£)</b>										
2011	27.9	26.7	21.6	75.0	23.2	22.5	32.6	30.1	43.5	28.3
<b>Indices</b>										
	DJK9	DJL4	DJL7	DJM4	DJM7	DJN4	DJN7	DJO5	DJO8	DJP3
2011	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2012	99.0 <sup>†</sup>	89.5 <sup>†</sup>	99.8 <sup>†</sup>	99.8 <sup>†</sup>	100.6 <sup>†</sup>	102.9 <sup>†</sup>	107.8 <sup>†</sup>	100.0 <sup>†</sup>	101.7 <sup>†</sup>	87.7 <sup>†</sup>
2013	96.2	84.9	101.9	92.5	95.8	94.8	103.9	86.5	108.7	91.3
2014	100.7	82.0	104.1	95.2	109.4	97.4	109.1	91.4	110.7	92.1
2011 Q2	101.2 <sup>†</sup>	98.0 <sup>†</sup>	99.0 <sup>†</sup>	102.7 <sup>†</sup>	97.5 <sup>†</sup>	102.3 <sup>†</sup>	103.7 <sup>†</sup>	98.0 <sup>†</sup>	97.5 <sup>†</sup>	102.4
Q3	99.2	112.7	104.4	100.9	100.4	99.0	99.8	104.1	102.7	101.1
Q4	101.3	104.0	103.5	94.9	104.5	98.2	97.9	101.5	104.3	100.0 <sup>†</sup>
2012 Q1	100.4	86.7	101.8	95.6	103.0	100.0	103.6	103.8	102.0	95.6
Q2	99.0	90.2	97.3	88.1	101.1	101.1	107.3	102.3	100.3	87.2
Q3	99.5	88.5	99.6	86.2	99.2	108.0	110.1	97.8	100.1	83.0
Q4	97.0	92.6	100.5	89.6	99.1	102.6	110.2	95.9	104.3	85.1
2013 Q1	96.9	85.1	101.3	89.0	94.3	96.7	110.1	83.9	105.3	87.7
Q2	97.3	84.3	105.0	94.4	93.1	92.5	103.9	84.3	108.2	89.5
Q3	95.8	85.0	100.7	91.1	96.1	92.5	99.1	88.7	109.9	93.3
Q4	94.7	85.1	100.5	95.4	99.5	97.6	102.6	89.0	111.4	94.6
2014 Q1	99.1	86.4	101.9	95.5	106.4	97.5	107.5	92.5	111.3	93.4
Q2	100.6	87.2	104.4	96.7	111.9	96.5	109.6	92.2	108.3	91.2
Q3	101.8	78.7	105.9	93.3	115.1	97.0	110.8	90.5	109.9	92.1
Q4	101.2	75.6	104.2	95.2	104.0	98.5	108.4	90.3	113.1	91.5
2015 Q1	98.4	77.2	108.5	96.8	102.2	99.4	98.2	85.6	114.4	91.6
<b>Per cent change on quarter a year ago</b>										
	DJL3	DJL6	DJM3	DJM6	DJM9	DJN6	DJN9	DJO7	DJP2	DJP5
2011 Q2	10.6 <sup>†</sup>	1.9 <sup>†</sup>	-6.0 <sup>†</sup>	-6.5 <sup>†</sup>	-3.9 <sup>†</sup>	6.6 <sup>†</sup>	-5.1 <sup>†</sup>	1.9 <sup>†</sup>	11.6 <sup>†</sup>	8.1 <sup>†</sup>
Q3	4.2	18.0	6.1	-7.6	-3.3	-0.1	-7.5	6.1	15.3	3.5
Q4	0.5	12.6	5.3	-7.0	10.5	0.6	-5.4	-1.5	12.6	4.2
2012 Q1	2.1	1.6	9.3	-5.9	5.6	-0.5	5.1	7.7	6.8	-0.9
Q2	-2.2	-8.0	-1.7	-14.2	3.7	-1.2	3.5	4.4	2.9	-14.8
Q3	0.3	-21.5	-4.6	-14.6	-1.2	9.1	10.3	-6.1	-2.5	-17.9
Q4	-4.2	-11.0	-2.9	-5.6	-5.2	4.5	12.6	-5.5	-	-14.9
2013 Q1	-3.5	-1.8	-0.5	-6.9	-8.4	-3.3	6.3	-19.2	3.2	-8.3
Q2	-1.7	-6.5	7.9	7.2	-7.9	-8.5	-3.2	-17.6	7.9	2.6
Q3	-3.7	-4.0	1.1	5.7	-3.1	-14.4	-10.0	-9.3	9.8	12.4
Q4	-2.4	-8.1	-	6.5	0.4	-4.9	-6.9	-7.2	6.8	11.2
2014 Q1	2.3	1.5	0.6	7.3	12.8	0.8	-2.4	10.3	5.7	6.5
Q2	3.4	3.4	-0.6	2.4	20.2	4.3	5.5	9.4	0.1	1.9
Q3	6.3	-7.4	5.2	2.4	19.8	4.9	11.8	2.0	-	-1.3
Q4	6.9	-11.2	3.7	-0.2	4.5	0.9	5.7	1.5	1.5	-3.3
2015 Q1	-0.7	-10.6	6.5	1.4	-3.9	1.9	-8.7	-7.5	2.8	-1.9
<b>Per cent change on previous quarter</b>										
	DJL2	DJL5	DJM2	DJM5	DJM8	DJN5	DJN8	DJO6	DJO9	DJP4
2011 Q2	3.0 <sup>†</sup>	14.9 <sup>†</sup>	6.3 <sup>†</sup>	1.1 <sup>†</sup>	- <sup>†</sup>	1.8 <sup>†</sup>	5.2 <sup>†</sup>	1.7 <sup>†</sup>	2.1 <sup>†</sup>	6.1 <sup>†</sup>
Q3	-2.0	15.0	5.5	-1.8	3.0	-3.2	-3.8	6.2	5.3	-1.3
Q4	2.1	-7.7	-0.9	-5.9	4.1	-0.8	-1.9	-2.5	1.6	-1.1
2012 Q1	-0.9	-16.6	-1.6	0.7	-1.4	1.8	5.8	2.3	-2.2	-4.4
Q2	-1.4	4.0	-4.4	-7.8	-1.8	1.1	3.6	-1.4	-1.7	-8.8
Q3	0.5	-1.9	2.4	-2.2	-1.9	6.8	2.6	-4.4	-0.2	-4.8
Q4	-2.5	4.6	0.9	3.9	-0.1	-5.0	0.1	-1.9	4.2	2.5
2013 Q1	-0.1	-8.1	0.8	-0.7	-4.8	-5.8	-0.1	-12.5	1.0	3.1
Q2	0.4	-0.9	3.7	6.1	-1.3	-4.3	-5.6	0.5	2.8	2.1
Q3	-1.5	0.8	-4.1	-3.5	3.2	-	-4.6	5.2	1.6	4.2
Q4	-1.1	0.1	-0.2	4.7	3.5	5.5	3.5	0.3	1.4	1.4
2014 Q1	4.6	1.5	1.4	0.1	6.9	-0.1	4.8	3.9	-0.1	-1.3
Q2	1.5	0.9	2.5	1.3	5.2	-1.0	2.0	-0.3	-2.7	-2.4
Q3	1.2	-9.7	1.4	-3.5	2.9	0.5	1.1	-1.8	1.5	1.0
Q4	-0.6	-3.9	-1.6	2.0	-9.6	1.5	-2.2	-0.2	2.9	-0.7
2015 Q1	-2.8	2.1	4.1	1.7	-1.7	0.9	-9.4	-5.2	1.1	0.1

<sup>†</sup> 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<sup>1</sup>

United Kingdom

Seasonally adjusted (2011=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
<b>Level (£k)</b>											
2011	33.5	44.0	21.6	73.5	106.5	342.1	48.3	27.1	33.9	26.1	40.2
<b>Indices</b>											
	DJE6	DJE9	DJF4	DJF7	DJG5	DJH4	DJH7	DJI2	DJI5	DJJ3	DJJ6
2011	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2012	100.0	98.1	101.8	102.0	98.7 <sup>†</sup>	98.7	100.7 <sup>†</sup>	103.7 <sup>†</sup>	102.0	100.6	98.2
2013	104.8	99.1	97.1	101.0	98.8	94.9	102.3	108.5	100.8	102.5	90.3
2014	110.1 <sup>†</sup>	101.3 <sup>†</sup>	94.4 <sup>†</sup>	99.3 <sup>†</sup>	98.9	93.7 <sup>†</sup>	103.0	113.4	100.1	100.3 <sup>†</sup>	93.2 <sup>†</sup>
2011 Q2	100.0	100.2	99.4	98.5	98.7 <sup>†</sup>	100.0	99.0 <sup>†</sup>	99.9	99.0	99.7	98.1 <sup>†</sup>
Q3	100.9 <sup>†</sup>	100.9	100.9	101.3	100.9	100.5	101.8	100.8	100.9	100.1 <sup>†</sup>	100.2
Q4	100.3	99.4	101.3	101.0	101.3	99.6	102.2	99.4 <sup>†</sup>	101.5	98.5	101.3
2012 Q1	99.7	99.8	101.5	104.3 <sup>†</sup>	99.0	98.5	102.9	102.8	101.9	99.1	99.7
Q2	99.0	98.1	102.4	102.5	99.3	100.5	99.7	102.0	101.8	99.5	98.8
Q3	100.8	97.4	102.9	101.1	98.8	97.9	100.6	104.1	102.7	105.4	100.3
Q4	100.6	96.9	100.4	100.2	97.5	97.7	99.4	106.0	101.4	98.2	94.1
2013 Q1	102.5	99.6	99.7	101.4	99.1	98.1	101.3	104.2	101.2	99.8	95.0
Q2	104.4	99.7	98.3	101.1	98.9	95.0	102.6	107.9	100.4	103.0	92.2
Q3	105.7	98.6	96.3 <sup>†</sup>	101.1	98.7	92.9	103.1	109.9	100.8	103.0	87.3
Q4	106.7	98.5	93.9	100.4	98.3	93.6	102.2	111.9	100.8	104.3	86.6
2014 Q1	108.7	100.1 <sup>†</sup>	94.3	98.7	98.5	93.7 <sup>†</sup>	101.1	112.8	100.3	101.8	90.7
Q2	109.8	100.9	94.4	98.8	98.6	94.1	102.9	112.9	99.8	103.1	91.7
Q3	110.1	102.0	94.6	98.1	97.5	94.2	103.3	114.0	100.2	98.8	95.1
Q4	111.6	102.0	94.1	101.4	101.0	92.6	104.6	113.9	100.0 <sup>†</sup>	97.5	95.4
2015 Q1	112.0	104.3	94.4	101.7	99.3	92.0	102.7	115.3	100.0	96.4	94.4
<b>Per cent change on quarter a year ago</b>											
	DJE8	DJF3	DJF6	DJF9	DJG8	DJH6	DJH9	DJI4	DJI7	DJJ5	DJJ8
2011 Q2	1.7	1.7	0.1	-2.8	-3.1 <sup>†</sup>	5.5	5.5 <sup>†</sup>	3.2	-0.4	-0.1	2.3
Q3	2.9 <sup>†</sup>	1.2	1.0	0.4	-0.8	6.5	7.8	3.1	1.5	3.8	3.6
Q4	2.2	0.1	3.9	-3.3	1.7	-0.9	6.6	1.8	1.7	0.4	4.4
2012 Q1	0.9	0.4	3.2	5.2 <sup>†</sup>	-0.1	-1.4	6.1	2.9	3.3	-2.6 <sup>†</sup>	-0.7 <sup>†</sup>
Q2	-1.0	-2.1	3.0	4.1	0.6	0.5	0.7	2.1 <sup>†</sup>	2.8	-0.2	0.7
Q3	-0.1	-3.5	2.0	-0.2	-2.1	-2.6	-1.2	3.3	1.8	5.3	0.1
Q4	0.3	-2.5	-0.9	-0.8	-3.8	-1.9	-2.7	6.6	-0.1	-0.3	-7.1
2013 Q1	2.8	-0.2	-1.8	-2.8	0.1	-0.4	-1.6	1.4	-0.7	0.7	-4.7
Q2	5.5	1.6	-4.0	-1.4	-0.4	-5.5	2.9	5.8	-1.4	3.5	-6.7
Q3	4.9	1.2	-6.4 <sup>†</sup>	-	-0.1	-5.1	2.5	5.6	-1.9	-2.3	-13.0
Q4	6.1	1.7	-6.5	0.2	0.8	-4.2	2.8	5.6	-0.6	6.2	-8.0
2014 Q1	6.0	0.5 <sup>†</sup>	-5.4	-2.7	-0.6	-4.5 <sup>†</sup>	-0.2	8.3	-0.9	2.0	-4.5
Q2	5.2	1.2	-4.0	-2.3	-0.3	-0.9	0.3	4.6	-0.6	0.1	-0.5
Q3	4.2	3.4	-1.8	-3.0	-1.2	1.4	0.2	3.7	-0.6	-4.1	8.9
Q4	4.6	3.6	0.2	1.0	2.7	-1.1	2.3	1.8	-0.8 <sup>†</sup>	-6.5	10.2
2015 Q1	3.0	4.2	0.1	3.0	0.8	-1.8	1.6	2.2	-0.3	-5.3	4.1
<b>Per cent change on previous quarter</b>											
	DJE7	DJF2	DJF5	DJF8	DJG6	DJH5	DJH8	DJI3	DJI6	DJJ4	DJJ7
2011 Q2	1.2	0.8	1.0	-0.6	-0.4 <sup>†</sup>	0.1	2.1 <sup>†</sup>	- <sup>†</sup>	0.4	-2.0	-2.3 <sup>†</sup>
Q3	0.9 <sup>†</sup>	0.7	1.5	2.8	2.2	0.5	2.8	0.9	1.9	0.4 <sup>†</sup>	2.1
Q4	-0.6	-1.5	0.4	-0.3	0.4	-0.9	0.4	-1.4	0.6	-1.6	1.1
2012 Q1	-0.6	0.4	0.2	3.3 <sup>†</sup>	-2.3	-1.1	0.7	3.4	0.4	0.6	-1.6
Q2	-0.7	-1.7	0.9	-1.7	0.3	2.0	-3.1	-0.8	-0.1	0.4	-0.9
Q3	1.8	-0.7	0.5	-1.4	-0.5	-2.6	0.9	2.1	0.9	5.9	1.5
Q4	-0.2	-0.5	-2.4	-0.9	-1.3	-0.2	-1.2	1.8	-1.3	-6.8	-6.2
2013 Q1	1.9	2.8	-0.7	1.2	1.6	0.4	1.9	-1.7	-0.2	1.6	1.0
Q2	1.9	0.1	-1.4	-0.3	-0.2	-3.2	1.3	3.6	-0.8	3.2	-2.9
Q3	1.2	-1.1	-2.0 <sup>†</sup>	-	-0.2	-2.2	0.5	1.9	0.4	-	-5.3
Q4	0.9	-0.1	-2.5	-0.7	-0.4	0.8	-0.9	1.8	-	1.3	-0.8
2014 Q1	1.9	1.6 <sup>†</sup>	0.4	-1.7	0.2	0.1 <sup>†</sup>	-1.1	0.8	-0.5	-2.4	4.7
Q2	1.0	0.8	0.1	0.1	0.1	0.4	1.8	0.1	-0.5	1.3	1.1
Q3	0.3	1.1	0.2	-0.7	-1.1	0.1	0.4	1.0	0.4	-4.2	3.7
Q4	1.4	-	-0.5	3.4	3.6	-1.7	1.3	-0.1	-0.2 <sup>†</sup>	-1.3	0.3
2015 Q1	0.4	2.3	0.3	0.3	-1.7	-0.6	-1.8	1.2	-	-1.1	-1.0

<sup>1</sup> productivity figures for industry K are experimental  
<sup>†</sup> 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<sup>1</sup>

United Kingdom

Seasonally adjusted (2011=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
<b>Level (£)</b>											
2011	22.6	24.4	16.3	40.5	59.5	218.9	28.1	17.6	24.0	20.0	27.6
<b>Indices</b>											
	DJQ4	DJQ7	DJR2	DJR5	DJS3	DJS6	DJS9	DJT7	DJU2	DJV6	DJV9
2011	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2012	99.5 <sup>†</sup>	96.9 <sup>†</sup>	101.2 <sup>†</sup>	102.4 <sup>†</sup>	99.5 <sup>†</sup>	98.2 <sup>†</sup>	99.6 <sup>†</sup>	102.7 <sup>†</sup>	100.6 <sup>†</sup>	99.7 <sup>†</sup>	99.4 <sup>†</sup>
2013	102.8	97.2	94.2	99.7	98.8	96.6	99.8	106.9	98.6	103.7	90.3
2014	106.8	99.4	92.4	97.7	98.4	94.3	99.7	115.6	97.5	99.8	91.9
2011 Q2	100.0 <sup>†</sup>	101.2 <sup>†</sup>	99.9 <sup>†</sup>	99.2 <sup>†</sup>	99.6 <sup>†</sup>	102.1 <sup>†</sup>	101.1 <sup>†</sup>	100.4 <sup>†</sup>	99.6 <sup>†</sup>	101.5 <sup>†</sup>	98.6 <sup>†</sup>
Q3	101.8	101.5	101.9	101.8	101.3	100.0	101.4	99.7	100.8	99.6	99.6
Q4	98.9	97.5	101.1	99.5	100.0	97.9	100.8	99.9	101.0	96.2	100.2
2012 Q1	99.4	98.8	102.1	102.4	100.2	96.4	102.5	102.2	102.2	98.7	99.7
Q2	98.8	96.3	102.0	102.3	99.9	98.8	98.5	100.7	99.9	98.7	99.5
Q3	100.2	96.2	101.3	101.0	98.3	97.7	98.1	101.8	100.4	102.9	104.5
Q4	99.6	96.4	99.3	103.7	99.5	99.9	99.4	105.9	100.0	98.5	93.8
2013 Q1	100.3	96.5	96.3	100.3	99.3	98.7	98.4	100.9	97.5	100.5	93.3
Q2	101.8	97.5	95.5	100.0	98.9	98.3	99.9	105.0	99.3	103.5	92.0
Q3	103.9	97.4	93.0	99.0	98.0	93.0	100.5	109.2	98.4	106.2	88.8
Q4	105.0	97.3	91.9	99.5	99.0	96.3	100.4	112.6	99.3	104.5	87.2
2014 Q1	105.8	97.1	92.9	97.0	97.3	93.1	99.4	114.0	97.3	103.8	88.2
Q2	106.6	98.6	92.7	96.8	98.0	94.5	99.4	116.3	97.8	100.1	91.5
Q3	106.6	100.6	92.6	98.0	98.0	96.4	99.9	116.7	97.6	100.1	91.9
Q4	108.2	101.4	91.4	99.1	100.2	93.0	100.0	115.3	97.1	95.3	95.9
2015 Q1	109.0	102.9	90.3	101.0	100.4	91.0	98.1	115.5	98.9	93.9	93.0
<b>Per cent change on quarter a year ago</b>											
	DJQ6	DJQ9	DJR4	DJR7	DJS5	DJS8	DJT6	DJT9	DJU7	DJV8	DJW3
2011 Q2	1.3 <sup>†</sup>	3.7	2.9 <sup>†</sup>	-3.8 <sup>†</sup>	-3.8 <sup>†</sup>	10.0 <sup>†</sup>	6.6 <sup>†</sup>	3.5 <sup>†</sup>	0.3 <sup>†</sup>	0.3 <sup>†</sup>	5.5
Q3	3.9	3.4 <sup>†</sup>	0.9	-0.6	-2.8	5.9	4.5	0.7	1.4	3.2	6.6 <sup>†</sup>
Q4	0.2	-1.0	5.0	-3.1	-1.3	1.9	3.6	2.3	1.5	-5.7	5.9
2012 Q1	0.1	-1.0	5.0	3.0	1.1	-3.5	6.0	2.2	3.7	-3.9	-1.9
Q2	-1.2	-4.8	2.1	3.1	0.3	-3.2	-2.6	0.3	0.3	-2.8	0.9
Q3	-1.6	-5.2	-0.6	-0.8	-3.0	-2.3	-3.3	2.1	-0.4	3.3	4.9
Q4	0.7	-1.1	-1.8	4.2	-0.5	2.0	-1.4	6.0	-1.0	2.4	-6.4
2013 Q1	0.9	-2.3	-5.7	-2.1	-0.9	2.4	-4.0	-1.3	-4.6	1.8	-6.4
Q2	3.0	1.2	-6.4	-2.2	-1.0	-0.5	1.4	4.3	-0.6	4.9	-7.5
Q3	3.7	1.2	-8.2	-2.0	-0.3	-4.8	2.4	7.3	-2.0	3.2	-15.0
Q4	5.4	0.9	-7.5	-4.1	-0.5	-3.6	1.0	6.3	-0.7	6.1	-7.0
2014 Q1	5.5	0.6	-3.5	-3.3	-2.0	-5.7	1.0	13.0	-0.2	3.3	-5.5
Q2	4.7	1.1	-2.9	-3.2	-0.9	-3.9	-0.5	10.8	-1.5	-3.3	-0.5
Q3	2.6	3.3	-0.4	-1.0	-	3.7	-0.6	6.9	-0.8	-5.7	3.5
Q4	3.0	4.2	-0.5	-0.4	1.2	-3.4	-0.4	2.4	-2.2	-8.8	10.0
2015 Q1	3.0	6.0	-2.8	4.1	3.2	-2.3	-1.3	1.3	1.6	-9.5	5.4
<b>Per cent change on previous quarter</b>											
	DJQ5	DJQ8	DJR3	DJR6	DJS4	DJS7	DJT2	DJT8	DJU6	DJV7	DJW2
2011 Q2	0.7 <sup>†</sup>	1.4	2.8 <sup>†</sup>	-0.2	0.5 <sup>†</sup>	2.2 <sup>†</sup>	4.6 <sup>†</sup>	0.4 <sup>†</sup>	1.0 <sup>†</sup>	-1.2 <sup>†</sup>	-3.0 <sup>†</sup>
Q3	1.8	0.3 <sup>†</sup>	2.0	2.6 <sup>†</sup>	1.7	-2.1	0.3	-0.7	1.2	-1.9	1.0
Q4	-2.8	-3.9	-0.8	-2.3	-1.3	-2.1	-0.6	0.2	0.2	-3.4	0.6
2012 Q1	0.5	1.3	1.0	2.9	0.2	-1.5	1.7	2.3	1.2	2.6	-0.5
Q2	-0.6	-2.5	-0.1	-0.1	-0.3	2.5	-3.9	-1.5	-2.3	-	-0.2
Q3	1.4	-0.1	-0.7	-1.3	-1.6	-1.1	-0.4	1.1	0.5	4.3	5.0
Q4	-0.6	0.2	-2.0	2.7	1.2	2.3	1.3	4.0	-0.4	-4.3	-10.2
2013 Q1	0.7	0.1	-3.0	-3.3	-0.2	-1.2	-1.0	-4.7	-2.5	2.0	-0.5
Q2	1.5	1.0	-0.8	-0.3	-0.4	-0.4	1.5	4.1	1.8	3.0	-1.4
Q3	2.1	-0.1	-2.6	-1.0	-0.9	-5.4	0.6	4.0	-0.9	2.6	-3.5
Q4	1.1	-0.1	-1.2	0.5	1.0	3.5	-0.1	3.1	0.9	-1.6	-1.8
2014 Q1	0.8	-0.2	1.1	-2.5	-1.7	-3.3	-1.0	1.2	-2.0	-0.7	1.1
Q2	0.8	1.5	-0.2	-0.2	0.7	1.5	-	2.0	0.5	-3.6	3.7
Q3	-	2.0	-0.1	1.2	-	2.0	0.5	0.3	-0.2	-	0.4
Q4	1.5	0.8	-1.3	1.1	2.2	-3.5	0.1	-1.2	-0.5	-4.8	4.4
2015 Q1	0.7	1.5	-1.2	1.9	0.2	-2.2	-1.9	0.2	1.9	-1.5	-3.0

<sup>1</sup> productivity figures for industry K are experimental  
<sup>†</sup> 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<sup>1</sup>

United Kingdom

Seasonally adjusted (2011=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	100.0	..	..	100.0	..	..
2012	98.7 <sup>†</sup>	..	..	98.2 <sup>†</sup>	..	..
2013	98.9	..	..	97.9	..	..
2014	100.0	..	..	98.7	..	..
2011 Q2	99.6 <sup>†</sup>	-0.2	0.1	100.3	0.9	1.0 <sup>†</sup>
Q3	100.7	1.2	1.1	100.4	0.9	0.1
Q4	100.3	0.8	-0.4 <sup>†</sup>	99.9 <sup>†</sup>	1.1 <sup>†</sup>	-0.5
2012 Q1	99.7	0.2	-0.6	99.3	-0.1	-0.7
Q2	98.4	-1.2	-1.3	98.2	-2.1	-1.1
Q3	98.8	-1.9	0.4	98.1	-2.3	-
Q4	97.7	-2.6	-1.1	97.3	-2.7	-0.9
2013 Q1	98.4	-1.3	0.8	97.6	-1.6	0.4
Q2	99.0	0.6	0.6	98.0	-0.1	0.4
Q3	99.1	0.3	0.1	98.0	-0.2	-0.1
Q4	99.0	1.4	-0.1	98.0	0.8	-
2014 Q1	99.3	0.9 <sup>†</sup>	0.2	98.2	0.6	0.2
Q2	99.9	0.9	0.6	98.5	0.5	0.2
Q3	100.2	1.1	0.3	99.1	1.2	0.6
Q4	100.7	1.7	0.5	99.1	1.1	-0.1
2015 Q1	100.3	1.0	-0.4	99.1	0.9	0.1

<sup>1</sup> Market sector productivity figures are experimental

<sup>†</sup> 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<sup>1</sup>

United Kingdom

(2011=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
<b>Level (£)</b>				
2011	22 831	10.2	46 333	24.6
<b>Indices</b>				
	DJ4K	DJ9	DJD8	DJP6
1998	80.3	80.1 <sup>†</sup>	95.5	89.0 <sup>†</sup>
1999	91.7 <sup>†</sup>	91.9	95.5	89.6
2000	97.8	97.5	95.7	89.6
2001	98.2	100.6	95.5	89.3
2002	112.6	116.9	99.2	93.6
2003	109.3	111.7	101.6 <sup>†</sup>	97.2
2004	106.0	107.8	104.2	100.1
2005	105.0	109.5	98.8	94.2
2006	103.3	106.5	98.3	95.0
2007	100.5	105.0	97.3	93.6
2008	107.1	111.6	94.3	92.4
2009	98.7	95.8	85.2	84.9
2010	92.9	89.6	97.6	96.4
2011	100.0	100.0	100.0	100.0
2012	95.2	100.1	93.3	93.5
2013	99.6	101.8	94.6	92.0
2014	90.3	92.2	101.9	96.6
<b>per cent change on previous year</b>				
	DJ4L	DJK2	DJE2	DJP8
1998	8.5 <sup>†</sup>	10.3 <sup>†</sup>	-1.3 <sup>†</sup>	-1.4 <sup>†</sup>
1999	14.2	14.8	-	0.6
2000	6.7	6.1	0.2	0.1
2001	0.4	3.2	-0.2	-0.3
2002	14.7	16.2	3.9	4.7
2003	-2.9	-4.4	2.4	3.9
2004	-3.0	-3.5	2.6	2.9
2005	-0.9	1.5	-5.2	-5.9
2006	-1.6	-2.7	-0.5	0.9
2007	-2.7	-1.4	-1.0	-1.5
2008	6.6	6.3	-3.1	-1.3
2009	-7.8	-14.2	-9.7	-8.1
2010	-5.9	-6.5	14.6	13.6
2011	7.6	11.6	2.5	3.7
2012	-4.8	-	-6.7	-6.6
2013	4.6	1.7	1.4	-1.6
2014	-9.3	-9.4	7.7	5.1

<sup>1</sup> Productivity figures for industry F are experimental

<sup>†</sup> 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)

		2007	2008	2009	2010	2011	2012	2013
United Kingdom		100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Nominal GVA per filled job</b>								
North East	DJDO	85.1	85.5	83.7	83.9	85.8	86.0	86.1
North West	DJDP	92.1	91.0	92.0	91.3	88.7	89.0	88.8
Yorkshire and The Humber	DMBC	90.1	88.7	87.8	86.8	86.1	86.6	87.2
East Midlands	DMBE	86.9	87.7	86.7	87.3	86.6	86.5	87.0
West Midlands	DMDN	87.9	86.8	86.4	88.0	88.6	88.4	88.4
East of England	DMDQ	98.7	99.7	99.0	99.3	98.4	97.2	97.7
London	DMGH	138.9	138.4	137.7	138.9	141.3	137.9	136.6
South East	DMGJ	105.8	107.0	107.0	107.1	106.3	107.3	108.0
South West	DMGK	90.6	90.0	89.7	89.9	88.0	89.4	88.6
England	DMGL	101.9	102.0	101.6	101.9	101.8	101.7	101.7
Wales	DMGM	82.7	80.3	80.5	79.1	82.2	81.2	81.5
Scotland	DMGX	92.6	94.2	97.8	95.9	95.2	95.7	95.8
Northern Ireland	DMOA	90.7	88.0	88.3	86.3	86.7	88.7	86.8
<b>Nominal GVA per hour worked</b>								
North East	DMOB	86.7	86.4	85.2	85.5	88.4	88.2	88.7
North West	DMOH	93.4	92.0	93.3	91.8	90.2	89.6	90.4
Yorkshire and The Humber	DMOK	91.6	91.0	89.0	88.0	86.9	87.2	88.5
East Midlands	DMOL	86.8	87.9	86.7	86.8	87.4	87.1	88.0
West Midlands	DMON	87.8	87.4	86.2	87.1	88.9	87.8	88.2
East of England	DMOO	100.9	100.6	100.3	100.5	99.8	98.2	98.5
London	DMOR	131.0	131.1	130.1	130.3	131.9	128.6	128.6
South East	DMOS	107.9	108.2	109.1	110.1	108.2	109.6	109.5
South West	DMOT	93.8	92.9	92.7	93.0	90.5	93.0	91.4
England	DMOV	102.2	102.1	101.6	101.8	101.7	101.4	101.7
Wales	DMOW	82.5	81.6	81.7	81.2	83.0	84.2	83.4
Scotland	DMOY	92.6	94.1	98.1	96.9	96.3	97.6	96.8
Northern Ireland	DMWA	85.2	83.7	84.0	83.6	84.1	86.6	82.2
<b>Nominal GVA per head</b>								
North East	DDBE	75.8	76.0	75.3	74.9	75.4	74.2	74.3
North West	DDBF	87.7	86.6	88.4	88.1	85.1	84.6	85.2
Yorkshire and The Humber	DDBG	85.9	83.9	84.3	83.0	82.2	81.6	81.4
East Midlands	DDBH	83.7	83.2	82.1	83.3	84.0	83.0	82.6
West Midlands	DDBI	83.8	82.4	80.9	82.2	82.2	82.9	83.0
East of England	DGPO	96.3	96.6	95.6	95.4	94.0	93.8	93.6
London	DGPP	167.3	169.4	167.4	167.4	171.9	171.9	171.9
South East	DGPF	108.0	109.0	108.5	110.2	109.5	111.1	110.5
South West	DDBM	91.6	91.1	92.4	93.2	91.0	90.6	90.5
England	DDBN	102.7	102.7	102.5	103.0	102.9	103.0	103.0
Wales	DDBO	73.4	71.1	72.1	71.2	72.6	71.7	72.2
Scotland	DDBP	93.9	96.0	97.9	94.0	94.2	94.0	94.0
Northern Ireland	DDBQ	83.7	81.0	81.0	79.5	78.9	78.0	76.7

† 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 (2011=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
<b>Indices</b>	TXEL	LNNM	LZVA	TXET	DJW6	DK3S	DJW9	DK3V	DK2G	DK56
2011	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2012	101.1	101.0	101.4 <sup>†</sup>	99.9	101.2	100.4 <sup>†</sup>	100.6	100.0 <sup>†</sup>	101.2	101.9 <sup>†</sup>
2013	102.3	102.2	103.8	99.9	100.6	102.0	99.8	101.1	102.8	104.6
2014	104.6	104.6	106.6	100.0	100.2 <sup>†</sup>	101.4	99.5	100.6	105.3	107.3
2011 Q2	100.2	100.2	99.5 <sup>†</sup>	100.0	100.4	99.7 <sup>†</sup>	100.4	99.8	100.3	99.5 <sup>†</sup>
Q3	99.7	99.7	99.5	100.0	99.4 <sup>†</sup>	98.5	99.5	98.5 <sup>†</sup>	99.7	99.5
Q4	99.9	99.8	100.4	99.9	99.1	99.1	99.1 <sup>†</sup>	98.6	99.9 <sup>†</sup>	100.8
2012 Q1	100.3	100.2	100.1	99.9	99.8	99.4	99.5	99.3	100.3	100.4
Q2	101.0	100.9	101.5	99.9	101.5	100.9	100.9	100.5	100.9	101.9
Q3	101.3	101.2	102.2	99.9	102.2	101.9	101.3	101.0	101.3	102.8
Q4	101.8	101.8 <sup>†</sup>	101.7	100.0 <sup>†</sup>	101.3	99.5	100.8	99.3	102.1	102.5
2013 Q1	101.6	101.3	103.7	99.7	100.5	102.1	99.6	101.0	101.9	104.6
Q2	101.9	101.8	103.3	99.9	100.0	101.8	99.3	101.0	102.4	104.1
Q3	102.5	102.5	104.2	100.0	100.9	102.8	100.1	101.8	103.1	104.8
Q4	103.1	103.1	104.1	100.0	101.1	101.5	100.2	100.6	103.7	104.8
2014 Q1	103.9	103.8	105.9	99.9	99.8	101.2	98.9	100.3	104.4	106.5
Q2	104.4	104.5	106.3	100.1	99.9	101.0	99.2	100.2	105.2	107.1
Q3	104.8	104.9	106.6	100.1	100.4	101.1	99.6	100.3	105.7	107.5
Q4	105.2	105.2	107.5	100.0	100.9	102.4	100.2	101.6	105.9	108.2
2015 Q1	105.9	105.8	107.6	99.9	103.0	103.2	102.2	102.5	106.4	108.3
<b>Per cent change on quarter a year ago</b>	DIW9	LNN0	LZVC		DJW8	DK3U	DJX3	DK44	DK2I	DK58
2011 Q2	0.8	0.8	0.1 <sup>†</sup>		0.4	0.6 <sup>†</sup>	-0.3	- <sup>†</sup>	1.1 <sup>†</sup>	0.4 <sup>†</sup>
Q3	-0.3	-0.3	-0.1		-0.9 <sup>†</sup>	-0.8	-1.2	-1.5	-0.2	0.2
Q4	0.1	0.1	0.5		-1.4	-1.7	-1.9	-3.0	0.4	1.3
2012 Q1	0.1	-	-0.4		-1.3	-3.3	-1.6 <sup>†</sup>	-3.7	0.1	0.2
Q2	0.8	0.7	2.0		1.1	1.2	0.5	0.7	0.6	2.4
Q3	1.6	1.5	2.7		2.8	3.5	1.8	2.5	1.6	3.3
Q4	1.9	2.0 <sup>†</sup>	1.3		2.2	0.4	1.7	0.7	2.2	1.7
2013 Q1	1.3	1.1	3.6		0.7	2.7	0.1	1.7	1.6	4.2
Q2	0.9	0.9	1.8		-1.5	0.9	-1.6	0.5	1.5	2.2
Q3	1.2	1.3	2.0		-1.3	0.9	-1.2	0.8	1.8	1.9
Q4	1.3	1.3	2.4		-0.2	2.0	-0.6	1.3	1.6	2.2
2014 Q1	2.3	2.5	2.1		-0.7	-0.9	-0.7	-0.7	2.5	1.8
Q2	2.5	2.7	2.9		-0.1	-0.8	-0.1	-0.8	2.7	2.9
Q3	2.2	2.3	2.3		-0.5	-1.7	-0.5	-1.5	2.5	2.6
Q4	2.0	2.0	3.3		-0.2	0.9	-	1.0	2.1	3.2
2015 Q1	1.9	1.9	1.6		3.2	2.0	3.3	2.2	1.9	1.7
<b>Per cent change on previous quarter</b>	DIW8	TXAJ	TXBU		DJW7	DK3T	DJX2	DK3Y	DK2H	DK57
2011 Q2	-	-	-1.0		-0.7	-3.0 <sup>†</sup>	-0.7	-3.2 <sup>†</sup>	0.1	-0.7 <sup>†</sup>
Q3	-0.5	-0.5	- <sup>†</sup>		-1.0 <sup>†</sup>	-1.2	-0.9	-1.3	-0.6	-
Q4	0.2	0.1	0.9		-0.3	0.6	-0.4 <sup>†</sup>	0.1	0.2 <sup>†</sup>	1.3
2012 Q1	0.4	0.4	-0.3		0.7	0.3	0.4	0.7	0.4	-0.4
Q2	0.7	0.7	1.4		1.7	1.5	1.4	1.2	0.6	1.5
Q3	0.3	0.3	0.7		0.7	1.0	0.4	0.5	0.4	0.9
Q4	0.5	0.6 <sup>†</sup>	-0.5		-0.9	-2.4	-0.5	-1.7	0.8	-0.3
2013 Q1	-0.2	-0.5	2.0		-0.8	2.6	-1.2	1.7	-0.2	2.0
Q2	0.3	0.5	-0.4		-0.5	-0.3	-0.3	-	0.5	-0.5
Q3	0.6	0.7	0.9		0.9	1.0	0.8	0.8	0.7	0.7
Q4	0.6	0.6	-0.1		0.2	-1.3	0.1	-1.2	0.6	-
2014 Q1	0.8	0.7	1.7		-1.3	-0.3	-1.3	-0.3	0.7	1.6
Q2	0.5	0.7	0.4		0.1	-0.2	0.3	-0.1	0.8	0.6
Q3	0.4	0.4	0.3		0.5	0.1	0.4	0.1	0.5	0.4
Q4	0.4	0.3	0.8		0.5	1.3	0.6	1.3	0.2	0.7
2015 Q1	0.7	0.6	0.1		2.1	0.8	2.0	0.9	0.5	0.1

<sup>†</sup>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
2010 Q4	-	-	-	-0.1	-0.7	0.2	-	-
2011 Q1	-	-	-	-	0.2	-0.7	-	-
Q2	-	-	0.1	0.1	-0.5	-	-	-
Q3	-	-	-0.1	-0.1	-	0.5	-	-
Q4	-	-	-0.1	-0.1	-0.8	-0.6	-	-
2012 Q1	-	-	-	0.1	0.9	1.0	-	-
Q2	-	-	-	0.1	0.1	-0.8	-	-
Q3	-	-	-	-0.1	-0.3	0.1	-	-
Q4	-	-	0.1	-	1.2	0.9	-	-
2013 Q1	-	-	-	-	-1.5	-1.7	-	-
Q2	-	-	-0.1	-	-0.2	0.5	-	-
Q3	-	-	-	-	-0.1	0.2	-	-
Q4	-	-	-0.1	-0.1	-0.5	0.5	-	-
2014 Q1	-	-	0.1	0.2	0.3	-0.9	-0.2	-0.1
Q2	-	-	0.2	0.1	0.3	0.5	-0.3	-0.2
Q3	0.2	0.2	0.1	-0.1	0.1	-	-0.2	0.1
Q4	0.4	0.2	0.5	0.3	-0.2	0.2	-0.4	-0.3

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
2010 Q4	0.1	-	-0.8	0.4	-	0.1
2011 Q1	0.1	0.1	-	-1.3	-	-0.1
Q2	-	-0.1	-0.4	0.6	0.1	-
Q3	0.1	0.1	-	0.3	-	-
Q4	-0.1	-0.2	-0.9	-0.4	-	0.1
2012 Q1	-	0.2	1.2	0.7	-0.1	-0.2
Q2	0.1	-	0.1	-0.5	-	0.1
Q3	-	-	-0.2	-	-	-
Q4	-0.1	-0.3	0.7	0.5	0.1	0.2
2013 Q1	-	0.3	-0.9	-0.9	-	-0.3
Q2	-	-	-0.4	-	-	0.1
Q3	-	-	-0.1	0.3	-0.1	-0.1
Q4	-	-0.3	-0.5	0.1	-	0.3
2014 Q1	0.2	0.5	0.8	0.4	-0.2	-0.5
Q2	0.1	-0.1	0.1	-0.7	-0.2	0.1
Q3	0.1	-	-0.4	-0.2	-0.1	-
Q4	0.5	0.1	-	0.5	-0.5	-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
2010 Q4	-	-	-0.7	0.1
2011 Q1	-	-	0.3	-0.3
Q2	0.1	0.1	-0.6	-0.3
Q3	-	-0.1	0.1	0.6
Q4	-	-	-0.7	-0.7
2012 Q1	-	-	0.8	1.2
Q2	-0.1	-	0.1	-1.0
Q3	-	-	-0.2	0.3
Q4	-	-	1.4	0.9
2013 Q1	-	-	-1.7	-1.9
Q2	0.1	0.1	-	0.7
Q3	-	-0.1	-0.2	0.1
Q4	-	-	-0.6	0.5
2014 Q1	-	-	0.4	-0.9
Q2	-0.1	-	0.1	0.4
Q3	-	-	-0.1	-0.1
Q4	-0.1	-0.1	-0.5	0.1