

Article

# Economic review: January 2015

The key economic stories from National Statistics produced over the latest month, painting a coherent picture of the UK economic performance using recent economic data.

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# 1. Main points

- The Quarterly National Accounts confirmed that the UK economy grew at an unrevised rate of 0.7% in Q3 2014, contributing to annual growth of 2.6%. This is the seventh successive quarter of output growth and the longest sustained run of quarterly growth since the onset of the economic downturn in 2008.
- UK labour productivity rose by 0.6% in Q3 2014, the strongest rise seen since Q2 2011 (when productivity rose by 1.3%). This coincides with an increase in real wage growth.
- A broad range of indicators which can be used to judge the degree of slack, both within firms and within the labour market, are showing signs of a reduction in spare capacity compared to a year earlier.
- Latest figures show the current account deficit widening to 6.0% of nominal GDP, representing the joint largest deficit since ONS records began in 1955.
- This edition of the Economic Review finds that above inflation changes in the level of personal allowances and changes in the distribution of real wages are both likely to have contributed to income tax receipts growing less strongly compared to nominal GDP.

## 2. Introduction

The Quarterly National Accounts indicated that the pace of economic growth eased slightly from 0.8% in Q2 to 0.7% in Q3, the seventh successive quarter of output growth in the UK. Annual growth of 2.6% is on a par with trend growth rates prior to the downturn. As a result, the UK economy is now estimated to be 2.9% larger than its pre-downturn level. This edition of the Economic Review briefly analyses contributions to growth by expenditure components.

This edition also explores five key features of the recent recovery that could determine the likely future path for the economy. These include the UK's relatively weak productivity performance and its relationship with wages, the extent of spare capacity for firms and the labour market and the likely strength of the UK's trade performance. In addition, questions surrounding the relationship between GDP growth and tax receipts are considered, as well as the extent to which the reduction in oil prices could benefit UK businesses.

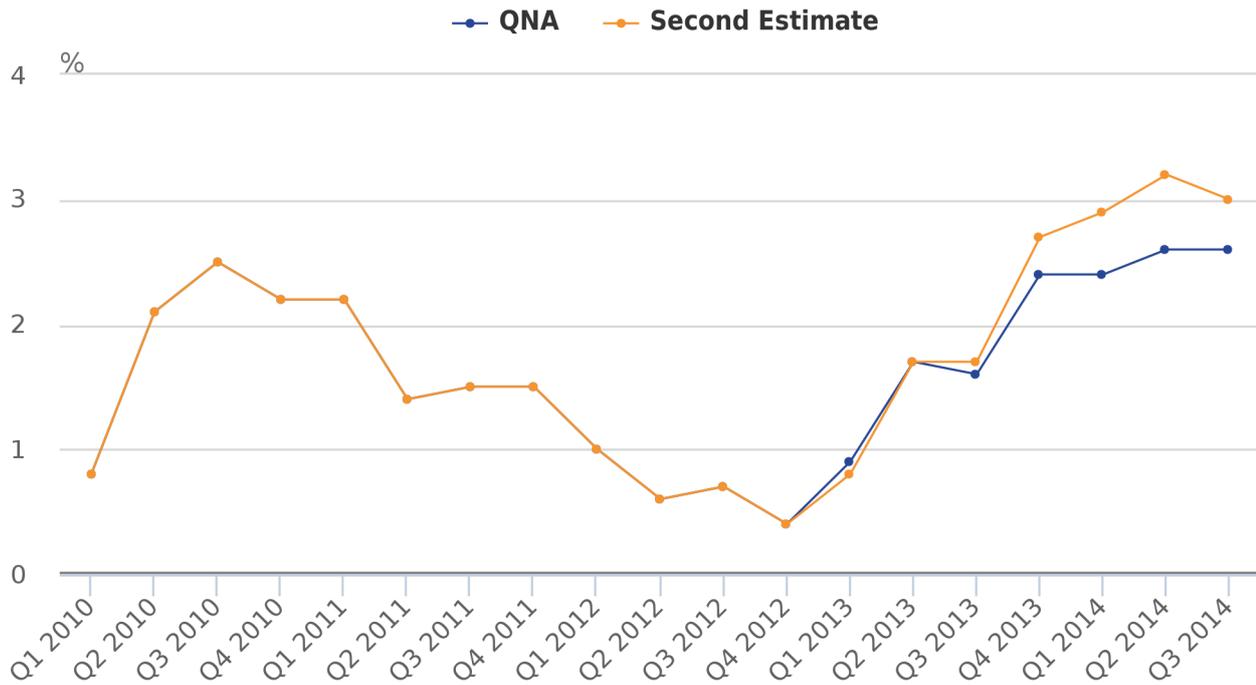
Finally, this edition builds on previous analysis that looked into the [variation in the inflation experience of UK households](#). The inflation experience of retired and non-retired households are compared, and changes in the price of household energy are shown to have had a varying impact on inflation among these different groups.

## 3. GDP growth in 2013 and 2014

The Quarterly National Accounts (QNA) indicated that the UK economy grew by 0.7% in the third quarter of 2014, unrevised from the previous estimate. This was the seventh consecutive quarter of output growth, and continues the strongest run of economic growth since the onset of the economic downturn.

Revisions to previous quarters mean that UK Gross Domestic Product (GDP) is now estimated to have been around 2.6% higher in Q3 2014 than the same period a year ago, 0.4 percentage points lower than previous estimates, but close to the trend rate of growth the UK experienced between Q1 1997 and Q4 2007. Figure 1 places these revisions in the context of the recent economic recovery, presenting GDP growth in each quarter compared to the same quarter a year earlier from Q1 2010. The majority of the downward revisions to GDP in the QNA release are shown to be concentrated in the second half of 2013 and the first half of 2014.

**Figure 1: GDP quarter on same quarter a year ago growth rates, QNA compared with Second Estimate, chain-volume measure, seasonally adjusted**

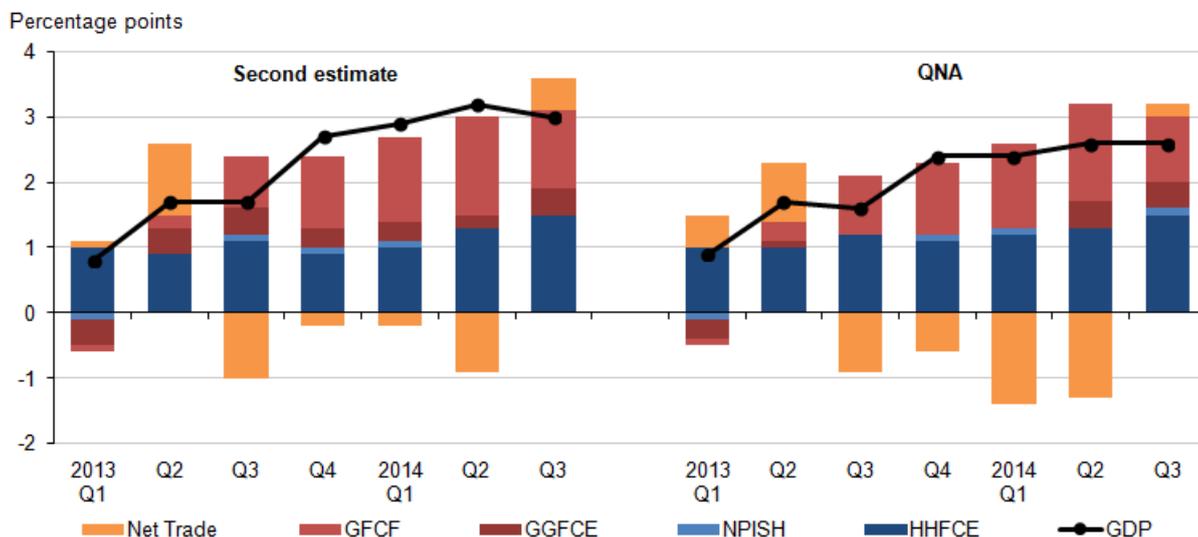


Source: Office for National Statistics

The incorporation of newly available information caused revisions to all three measures of GDP – output, expenditure and income. Figure 2 shows how the composition of GDP growth has changed in terms of expenditure components. New information resulted in downward revisions to net overseas trade and government final consumption (GGFCE) through much of 2013 and 2014, and a downward revision to business investment in the third quarter of 2014. The changes were offset in part by higher household final consumption.

The income measure of GDP was affected by downward revisions to financial companies' profits, while the output measure saw lower manufacturing output resulting from revisions to price deflators and new data on steel output.

**Figure 2: GDP growth and main component contributions, QNA compared with Second Estimate, chain-volume measure, seasonally adjusted**

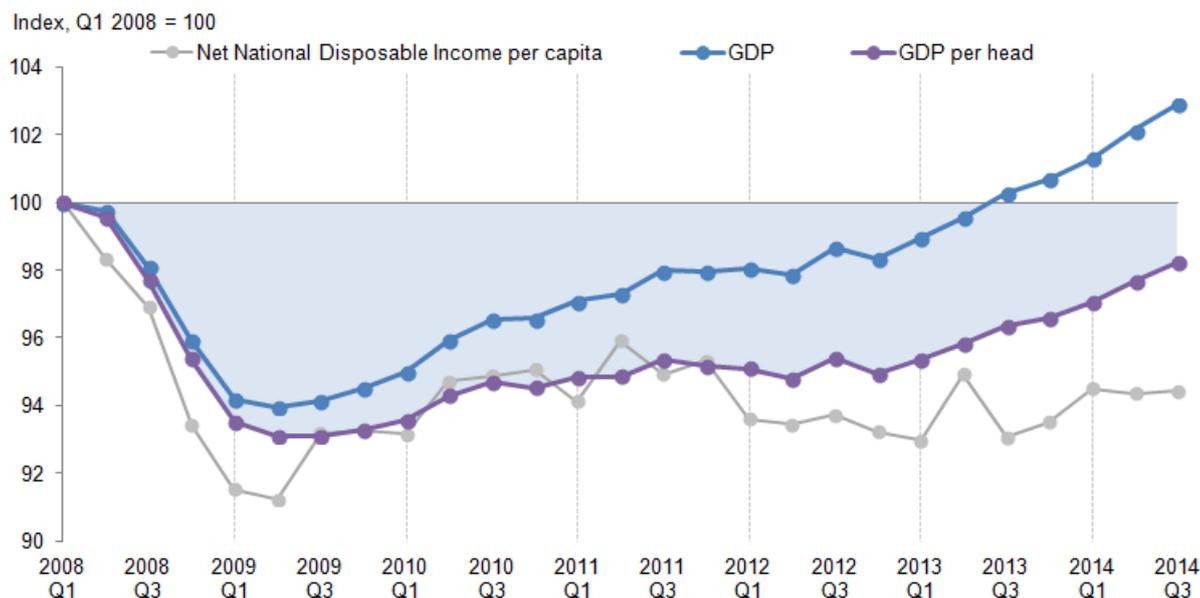


Notes:

1. GFCF refers to Gross Fixed Capital Formation
2. GGFCE refers to General Government Final Consumption Expenditure
3. NPISH refers to Non-Profit Institutions Serving Households
4. HHFCE refers to Household Final Consumption Expenditure

Notwithstanding these revisions to GDP and its components, the economic recovery continued to build momentum during the third quarter of 2014, and we can consider how this momentum has affected broader economic well-being indicators. Figure 3 shows the path of GDP per capita – which captures changes in both the volume of production in the UK and the growth of the population. This measure has seen continued growth in recent quarters and remains 1.8% below its pre-downturn level in Q3 2014. Net National Disposable Income (NNDI) per capita – which accounts for capital consumption, and only measures the income available to residents of a country – remained 5.6% below its pre-downturn peak in Q3 2014 ([Economic Well-being - Q3 2014](#)).

**Figure 3: GDP, GDP per capita, and Net National Disposable Income per capita, chain-volume measure, seasonally adjusted**



## 4. The UK's economic recovery

Although our understanding of the UK's economic performance during 2014 will continue to evolve into the New Year, it is clear that the recovery has gathered pace over the last 12 months.

The level of GDP was around 2.2% higher in Q3 2014 than in Q4 2013, including a strengthening of investment in both the public and private sectors and greater spending by households. The rate of unemployment among those aged 16 and over has fallen from 7.2% in Q4 2013 to just 6.0% in the three months to October 2014, while the headline inactivity rate remains close to record lows. Retail sales volumes grew by 6.4% over the year to December 2014, and while output in the production and construction industries remains below their respective pre-downturn levels, output growth has resumed across a broad range of industries.

As a consequence, independent forecasts of economic growth and the unemployment rate for 2015 appear relatively strong and have become more optimistic in recent months (Table 1).

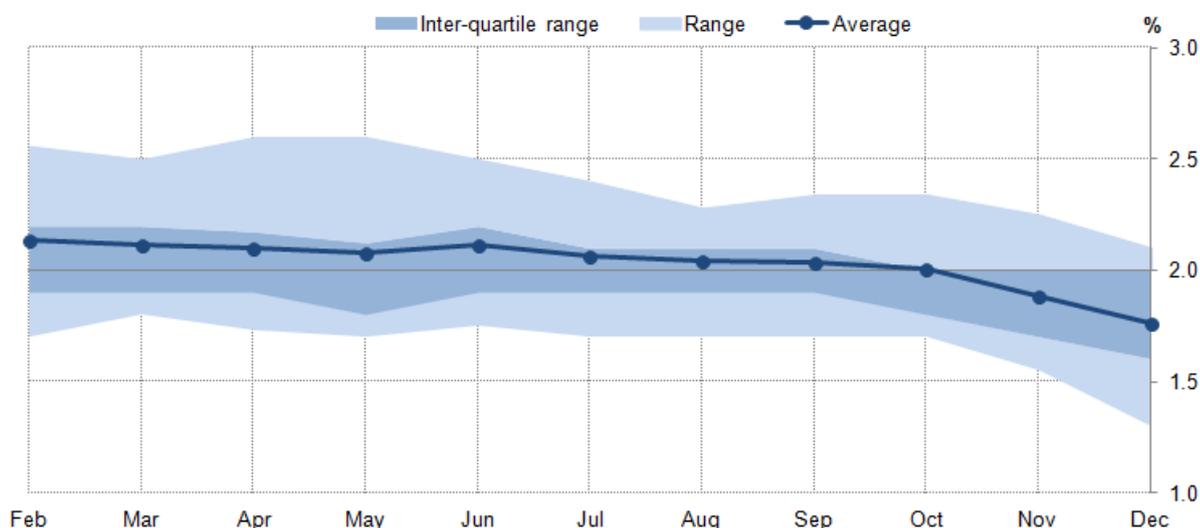
**Table 1: Independent forecasts for GDP growth and unemployment rate**

	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>GDP growth (2015)</b>											
Average	2.4	2.4	2.4	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6
Min	1.6	1.6	1.6	1.6	1.6	1.6	1.8	1.8	1.9	1.9	1.9
Max	3.2	3.2	3.6	3.6	3.6	3.6	3.7	3.7	3.5	3.2	3.0
<b>Unemployment (Q4 2015)</b>											
Average	6.2	6.2	6.2	6.0	6.0	5.8	5.6	5.6	5.5	5.5	5.3
Min	4.9	5.0	4.4	4.4	4.5	4.4	4.4	4.4	4.4	4.7	3.2
Max	6.7	6.7	6.7	6.6	6.6	6.3	6.2	6.4	6.0	5.9	5.9

Source: HM Treasury

However, perhaps the most striking feature of independent forecasts for 2015 is the fall in inflation projections over the last few months. Lower global oil prices – which fell from \$110 to \$68 between June and December 2014, and closed at \$51 on 6 January 2015 – are increasingly expected to hold down inflationary pressures during 2015. As is shown in Figure 4 below, the average forecast for consumer price inflation in the fourth quarter of 2015 has fallen from around 2.1% between February and September 2014, to around 1.7% in December 2014. The range of forecasts – after narrowing around the Bank of England’s inflation target during the middle part of the year – has also widened again, providing some evidence that there is increased uncertainty about inflation outcomes next year.

**Figure 4: Average and spread of independent Q4 2015 CPI inflation forecasts**



Notes:

1. 'Range' refers to the 10-90 percentile range.

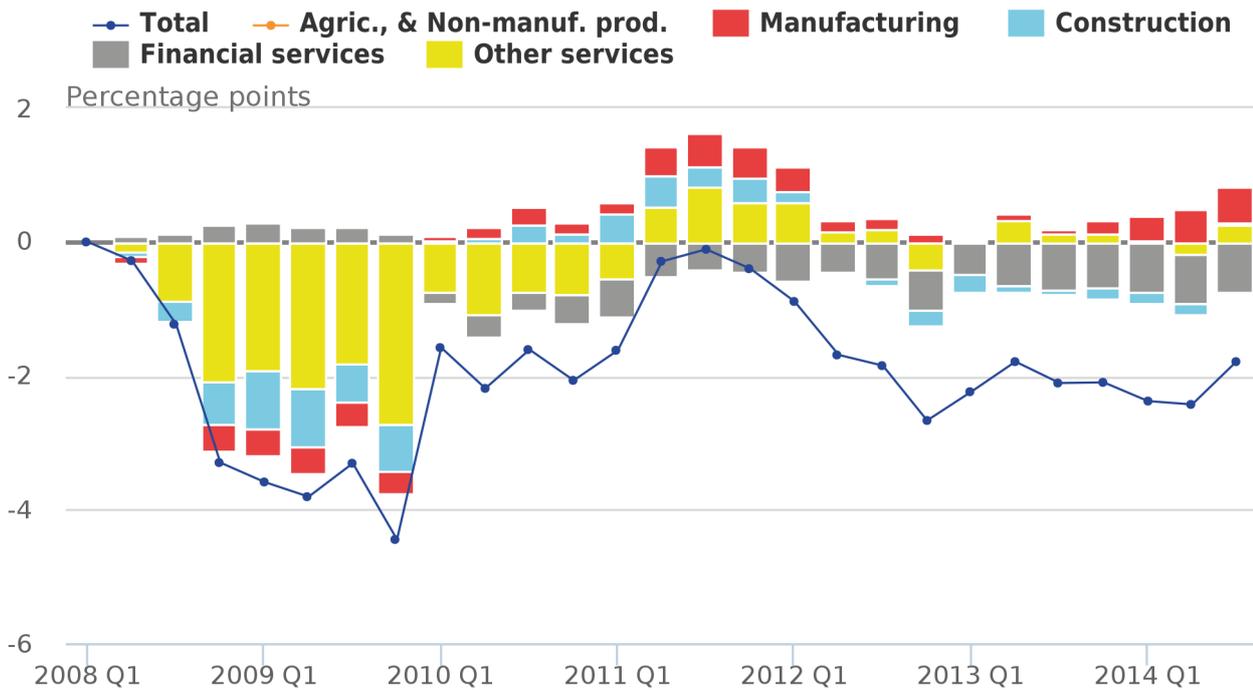
There are several features of the recent recovery that are likely to determine the future path for the economy. These include the UK's relatively weak productivity performance and its impact on wages, the extent of spare capacity for firms and the labour market and the likely strength of the UK's trade performance. In a general election year, questions about the relationship between GDP growth, tax receipts and the fiscal position are all central, as is the extent to which the reduction in oil prices will benefit the economy. This Review briefly presents on each of these five key questions for the economy in 2015.

## 5. Labour productivity

With GDP and employment growth correspondingly strong over much of 2013 and 2014, the UK experienced subdued labour productivity growth over the same period. However, the most recent labour productivity data published by ONS ([Labour Productivity - Q3 2014](#)) has shown clear improvement, with output per hour rising by 0.6% in Q3 2014 compared with the previous quarter. This was the strongest rise seen since Q2 2011 (when productivity rose by 1.3%) and was broad based across the headline production and services industries, which saw growth of 0.5% and 0.6% respectively. However the level of output per hour remained 1.8% below that experienced in Q1 2008, and remains significantly lower than the level of productivity that would have been experienced had 1997-2007 average rates of growth been obtained.

Figure 5 splits cumulative growth in whole economy output per hour into the contributions made by different industries. The contribution to the level of productivity relative to Q1 2008 is positive in both the manufacturing and 'other services' industries; resulting from the manufacturing industry surpassing the pre-downturn level of productivity by 5.9%, as well as strong productivity growth in the real estate, 'wholesale & retail' and 'admin & support' industries. In contrast, lower output per hour in financial services and 'agriculture & non-manufacturing production' (including the oil and gas industry) have together combined to reduce UK output per hour by 2.6% relative to pre-downturn levels.

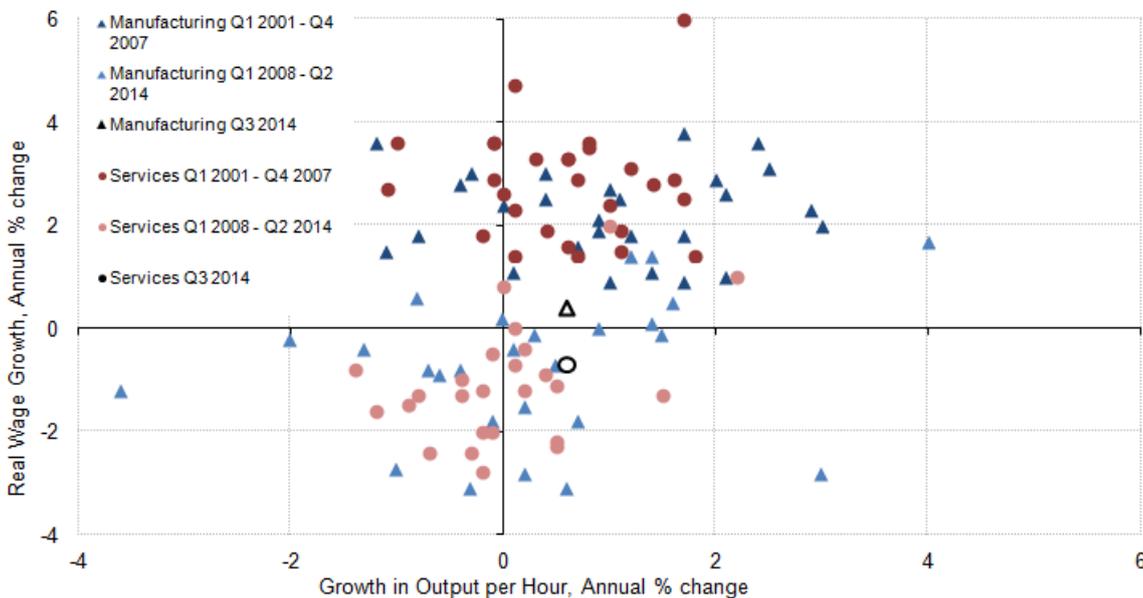
**Figure 5: Contributions to the growth of UK output per hour relative to Q1 2008**



Source: Office for National Statistics

The relative weakness of labour productivity since the downturn is one explanation for the slow growth of real wages in the UK over the corresponding period ([An Examination of Falling Real Wages - 2010 to 2013](#)). Figure 6 shows the annual growth in real wages plotted against the annual growth of output per hour for the manufacturing and services industries, dividing the observations into three time periods: Q1 2001 to Q4 2007, Q1 2008 to Q2 2014, and the most recent annual growth figure for Q3 2014. Each data point represents annual growth in real wages and the corresponding growth in output per hour in a given quarter. As economic theory would suggest, there appears to be a positive association between productivity growth and real wage growth for both industries. Figure 6 also makes clear that both output per hour and real wage growth has been subdued in the period since 2008, shown by the shift towards the bottom-left of the graph for the lighter data points.

**Figure 6: Annual growth in output per hour and real wages in services and manufacturing industries for selected periods**



The recent improvement in UK output per hour has been mirrored by an increase in the growth rate of real wages for both industries (from -0.1% in Q2 2014 to 0.4% in Q3 2014 for manufacturing, and from -2.0% in Q2 2014 to -0.7% in Q3 2014 for services). This result is shown in Figure 6: the data points for Q3 2014 in black are towards the top-right of the cluster of points showing annual growth rates since 2008, potentially hinting at a reversal of the post-downturn trend.

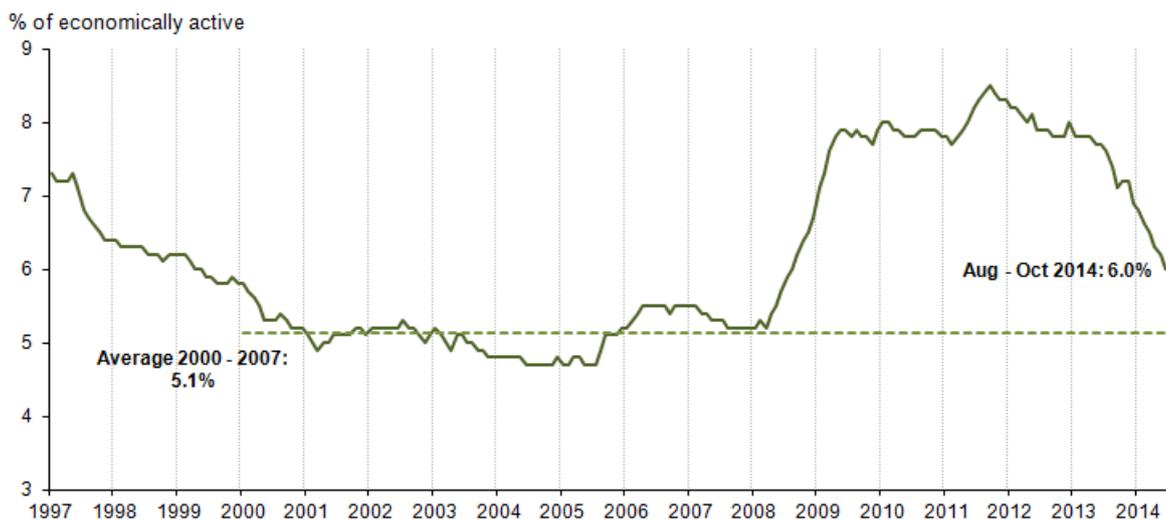
## 6. Spare capacity and the labour market

As the economy continues to recover, the extent of spare capacity is likely to remain at the centre of the UK's economic policy debate in 2015. Although measuring the degree of spare capacity or 'slack' is difficult to do with precision, the Bank of England's Monetary Policy Committee (MPC) judged that slack is likely to be around 1.0% of GDP in their [November Inflation Report](#).

The labour market – and in particular the number of people who could supply labour to firms – is one important source of information for this, and on these measures show some reduction in spare capacity over the last year. One such indicator, the rate of unemployment among those aged 16 and above, has fallen from 7.4% in the three months to October 2013, to 6.2% in the three months to July 2014, and to 6.0% in the three months to October 2014.

This is shown in Figure 7, indicating that the headline rate of unemployment has been on a downwards trend since the start of 2013, but remains above its 2000-2007 average, suggesting that there may be further spare capacity which could be drawn upon.

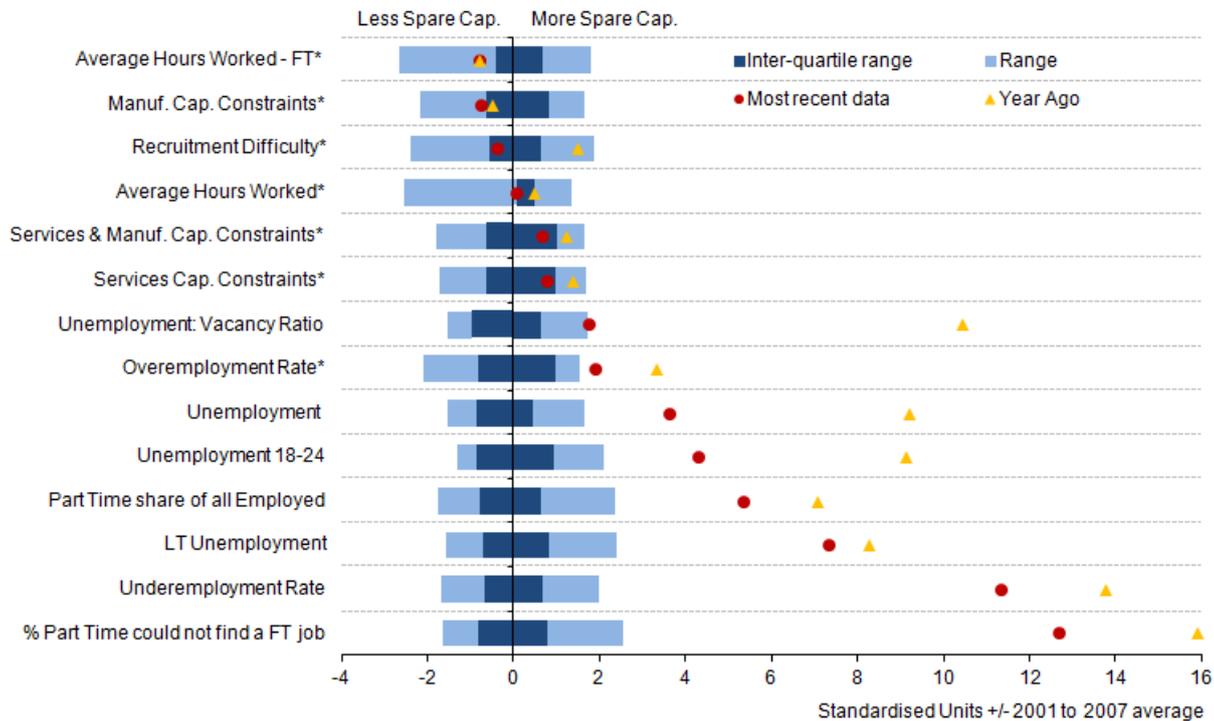
**Figure 7: Unemployment rate (16+)**



Source: Office for National Statistics

Figure 8 presents a broader range of measures which can be used to judge the degree of spare capacity, both within firms and within the labour market. This updates the analysis set out in the March 2014 Economic Review ([Economic Review - March 2014](#)). Variables which capture the degree of capacity utilisation – including average hours worked, capacity constraints and recruitment difficulty – are inverted to give a measure of spare capacity, and all variables are standardised and shown relative to their long-run average. Red dots – which indicate the most recent observation – to the left of the axis indicate lower-than-average spare capacity, while points to the right of the axis indicate higher-than-average spare capacity. Yellow triangles indicate the variables' value a year ago.

**Figure 8: Indicators of spare capacity: standardised units relative to the 2001-2007 average, several measures**



Source: Office for National Statistics & Bank of England

Notes:

1. Most recent data for recruitment difficulty and capacity constraints were collected between late October and late November 2014, while most recent data for overemployment and underemployment rate were collected in Q2 2014. The remaining labour market indicators were collected in the three months to October 2014. 'Year ago' refers to the period between late October and late November 2013, Q2 2013 and the 3 months to October 2013, for the respective sets of indicators.
2. All variables are standardised using their average and spread from 2001 to 2007. Standardised units are used for illustrative purposes in order to present several measures on a common basis and may not indicate probabilities due to non-normal distributions in the data. Points to the right of the axis indicate a greater degree of spare capacity than average over the period 2001-2007, points to the left of the axis indicate lower than average spare capacity.
3. Recruitment difficulty and capacity constraint measures for services and manufacturing are taken from the Bank of England's Agents' Summary of Business Conditions. Prior to 2005, the recruitment difficulty series captures skill shortages published by the Bank of England. Services & Manufacturing Capacity Constraints are calculated by weighting the respective series by their shares in UK output.
4. Asterisk (\*) denotes the variable has been inverted to give a measure of spare capacity.

Figure 8 suggests that much of the additional spare capacity in the UK economy compared with 2001-2007 is concentrated in the labour market, as measures of unemployment and part-time employment are above their long-run averages. In particular, the proportion of part-time workers who couldn't find a full-time job is markedly above the long-run average, suggesting that there are resources in the labour market which firms can mobilise to increase output. However, spare capacity within firms is much more limited: the Bank of England's capacity constraint and recruitment difficulty measures in particular, are close to or below their long-run averages.

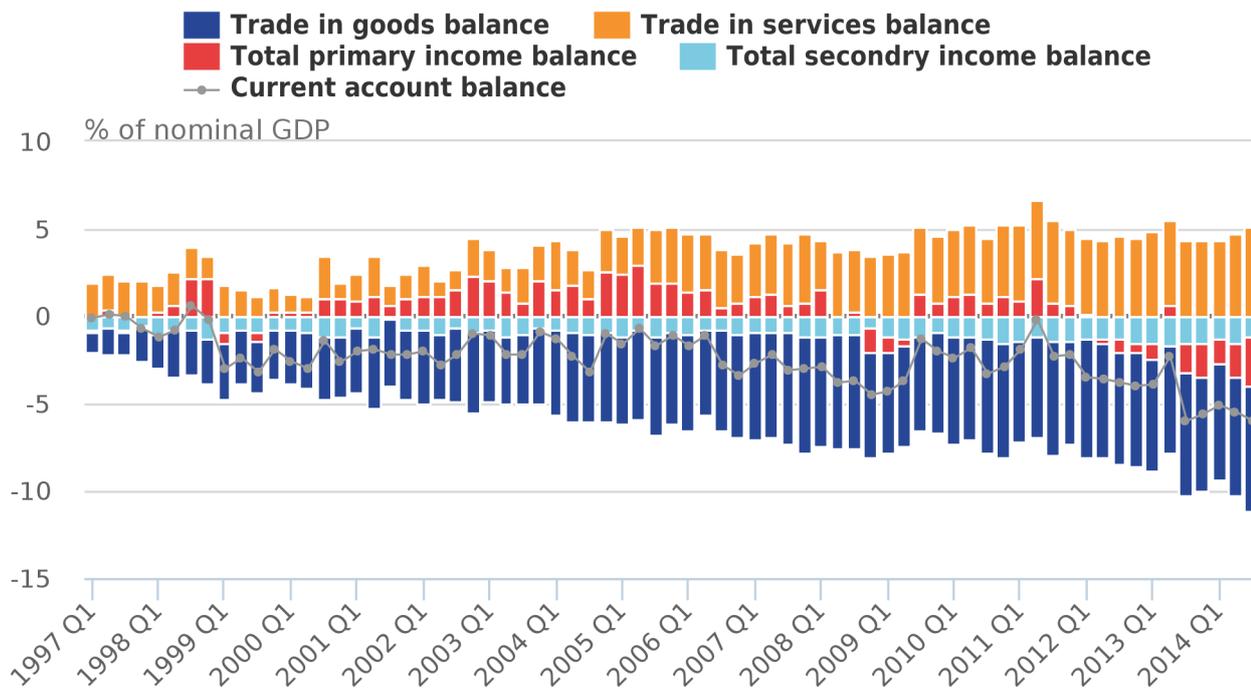
Figure 8 also provides a sense of how these variables have changed over the past year. Most of the variables show a shift to the left over the last twelve months, indicating a tightening in spare capacity as the economy has recovered. The move has been particularly marked in series based on unemployment data. Of these, the ratio of unemployed people to vacancies has shown the strongest evidence of tightening, reflecting both lower unemployment and higher vacancies. Recruitment difficulty and reported capacity constraints within manufacturing have also tightened and, together with average hours worked by full time workers, are now both above their respective long-term averages.

## 7. Balance of payments

The recent publication of the [United Kingdom Economic Accounts - Q3 2014](#) showed interesting developments in the current account balance and the net international investment position. Latest figures show the current account deficit widening to 6.0% of nominal GDP, representing the joint largest deficit since ONS records began in 1955.

Figure 9 breaks down the current account balance into its constituent parts – the goods and services trade balance, the primary income balance (income earned by UK residents from investment abroad, less income earned by non-residents on their UK investments), and the secondary income balance that captures transfers between the UK and other countries (for example payments and receipts to or from EU institutions and other international bodies). This shows that a surplus in services trade continues to offset a significant part of the deficit in goods trade, and has in the latest quarter reached a record of more than 5% of nominal GDP. The recent deterioration in the current account balance has been driven by a falling primary income balance (dark green bars).

**Figure 9: Current account balance and its constituent parts**



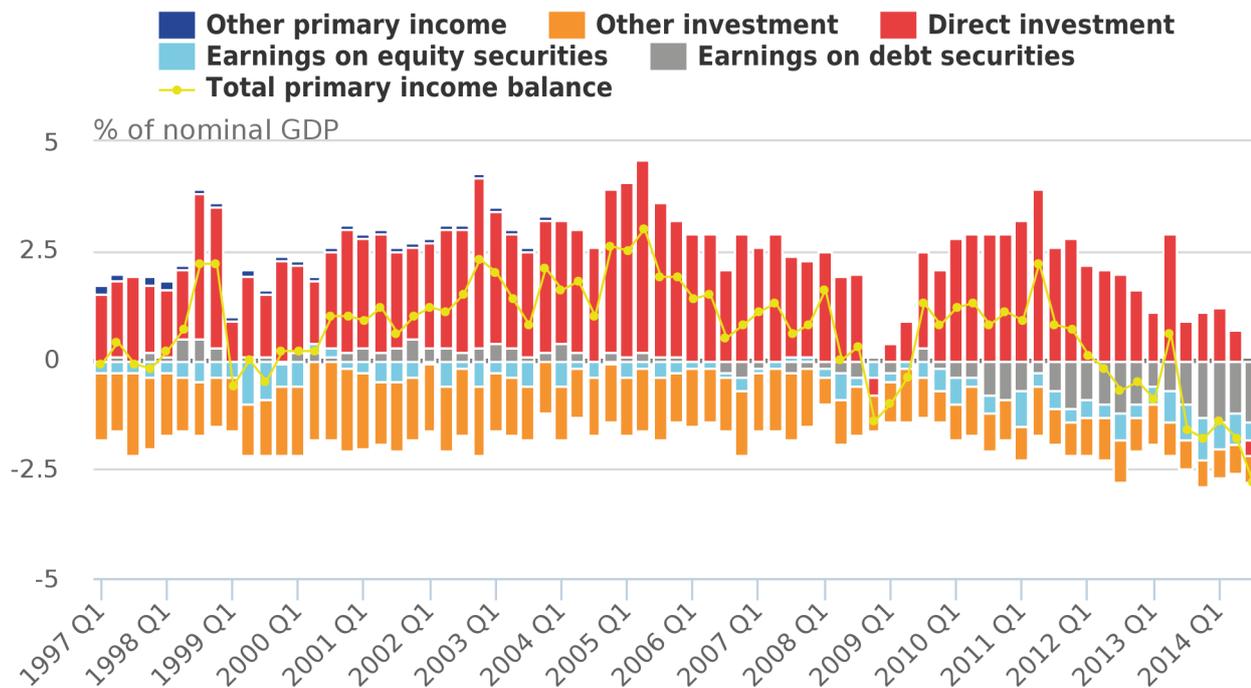
Source: Office for National Statistics

The deterioration in the primary income balance is a particularly interesting development, in part because the positive income balance experienced prior to the economic downturn came in spite of a negative net international investment position. This suggests that UK investors had on average obtained a higher rate of return on assets held abroad compared to foreign rates of return UK assets.

Figure 10 focuses on the primary income balance in more detail. It shows that the recent deterioration can be attributed to a decline in the direct investment income balance and net income earned on debt securities. Recently, declining net income from direct investment has coincided with UK residents reducing the stock holdings of direct investment assets while foreign investors continue to increase the holdings of UK direct investment assets. In addition, foreign rates of return on UK direct investment have been rising, while the UK rate of return on direct investment abroad has fallen. This could be attributed to the UK experiencing a stronger economic recovery relative to countries that the UK typically invests in, such as the Euro Area.

ONS will be holding an open Balance of Payments seminar that will explore this development in more detail on 23 January 2015 (details of registration can be found here). Slides and a summary of this session will follow on the ONS website after the event.

**Figure 10: Primary income balance and its constituent parts**

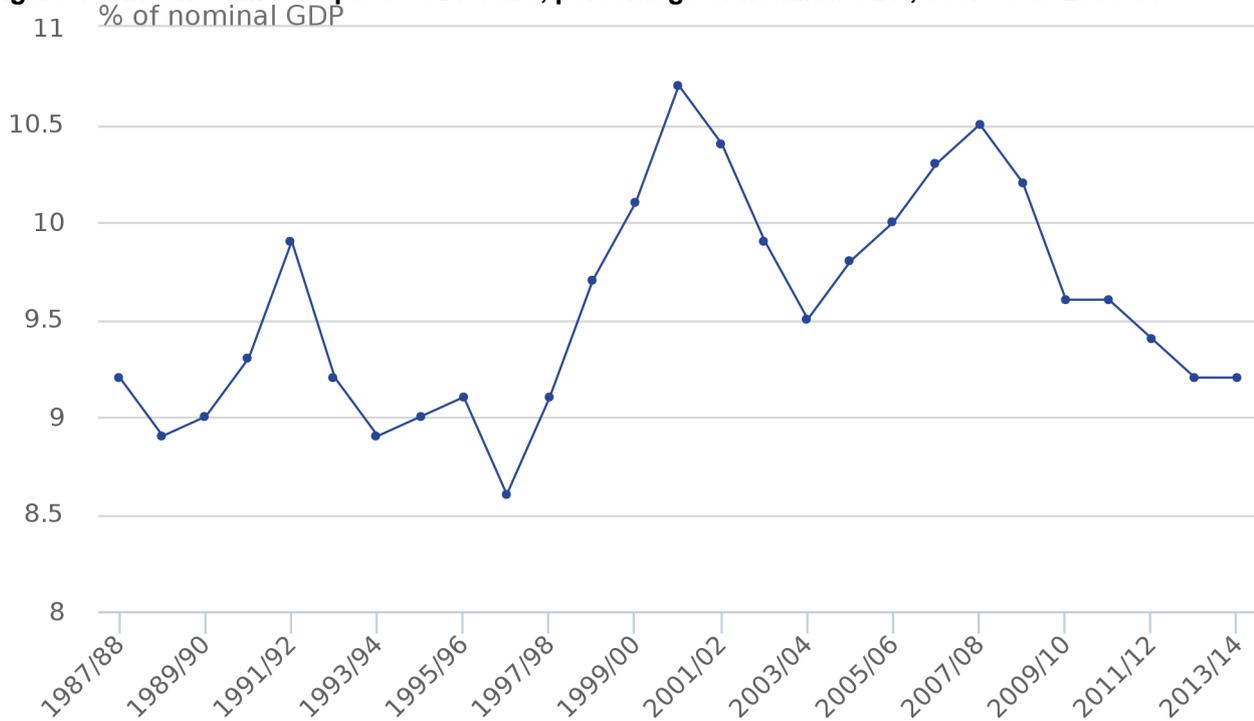


Source: Office for National Statistics

## 8. Tax receipts, the personal allowance, and the earnings distribution

Recent commentary has highlighted the weakness of tax revenues despite an increase in the rate of economic growth. While nominal GDP growth has averaged 2.4% between 2007/08 and 2013/14, income tax receipts have grown by just 0.1% per year on average over the same period. As a consequence, the ratio of income tax revenues to GDP has fallen quite sharply over this period, and is back to its level in 1997/98 (Figure 11).

**Figure 11: Income tax receipts to GDP ratio, percentage of nominal GDP, 1987/88 to 2013/14**



Source: Office for National Statistics

Several factors are likely to have contributed to the relative weakness of income tax receipts, but changes in the personal tax allowance, marginal rates and the distribution of earnings are likely to account for a large fraction of the recent fall. The rise in the personal allowance from £5225 in 2007/08 to £9440 in 2013/14 <sup>1</sup> is likely to have had a substantial impact on tax revenues. The impact of this change on the tax base is shown in Figure 12, which presents estimates of the number of people who earned less than the income tax threshold alongside similar estimates produced by simply uprating the 2007/08 threshold in line with CPI. Comparing the two lines suggests that the number of people earning less than the personal allowance – and therefore paying no income tax – rose to more than five million in 2014, almost double the number who would have been below the threshold had it moved in line with the CPI.

**Figure 12: Number of employees earning less than the personal allowance (PA), millions, Q1 2002 to Q2 2014**

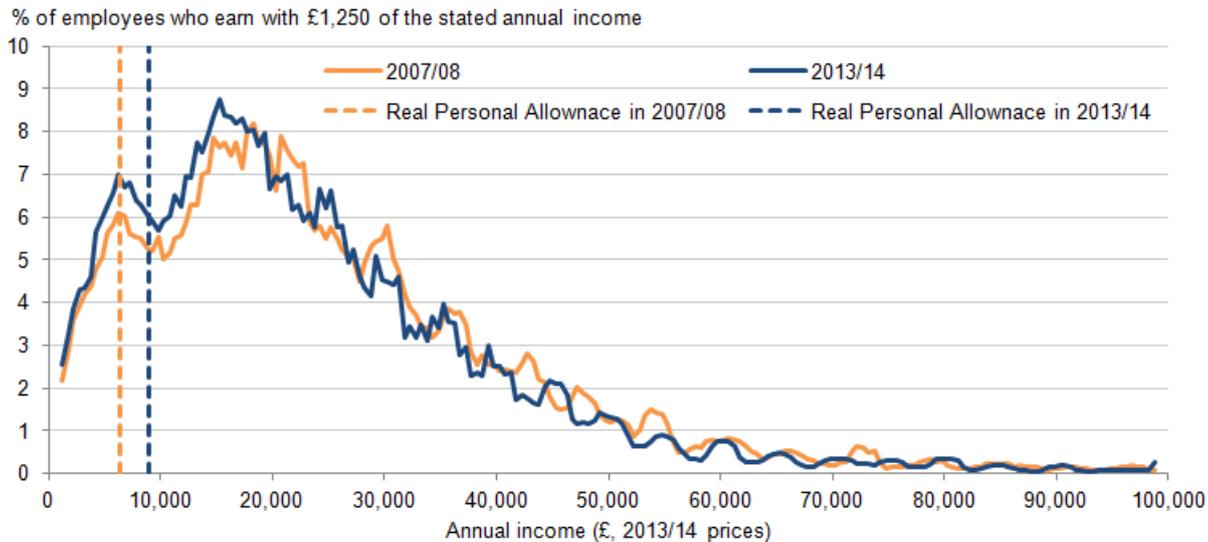


Source: Office for National Statistics

Shifts in the income distribution may also have played an important part in limiting revenue growth. As the income distribution evolves, the number of individuals falling into specific tax brackets changes, which has a knock-on effect on revenues: larger numbers in the lower tax brackets will act to depress revenue growth.

This effect, and the impact of changes in the personal tax allowance are shown in more detail in Figure 13, by plotting the distribution of real earnings in 2007-08 and 2013-14, up to £100,000 per year<sup>2</sup>. First, it shows that the distribution of real earnings in the UK is skewed to the lower end, and is concentrated in two peaks: one at around £6,000 a year – accounting for around 7% of those earning below £100,000 in 2013/4 – and one at around £18,000 a year – accounting for around 8% of the same group. Hourly wages between the two peaks are broadly similar: instead, the difference appears to be driven by the number of hours worked. Those in the lower peak tend to work part-time and close to the minimum wage, while those in the higher peak generally work full-time. Consistent with Figure 12, these data suggest that the rise in the personal tax allowance has reduced the tax liability of a growing number of part-time workers. Perhaps more significant, it also suggests that the marginal impact of further real increases in the tax allowance are likely to have a bigger effect on revenues.

**Figure 13: Real gross annual earnings distribution, and real personal allowance (2013/14 prices), in 2007/08 and 2013/14**



**Source: Office for National Statistics**

**Notes:**

1. Derived from Gross Weekly Earnings in the Labour Force Survey. The sample is restricted to those reporting earning under £1,923 per week (or, equivalently, £100,000 per annum). All figures are 2013/14 prices

Figure 13 also shows that the skew of the income distribution presented in the Labour Force Survey wage data became more pronounced between 2007/08 and 2013/14. Over this period, the proportion of employees earning up to £18,000 has risen from 39.4% to 44.0% of earners under £100,000 per year<sup>3</sup>. This finding is consistent with a reduction in real wages over this period ([An Examination of Falling Real Wages - 2010 to 2013](#)), and the concentration of recent employment growth in lower-skilled occupations ([Economic Review - December 2014](#)). Together, the increase in the personal tax threshold – which reduces the number of people who pay income tax and the tax liability of all other taxpayers – and the increased skew in the UK’s earnings distribution may help to explain the recent weakness of income tax receipts in particular.

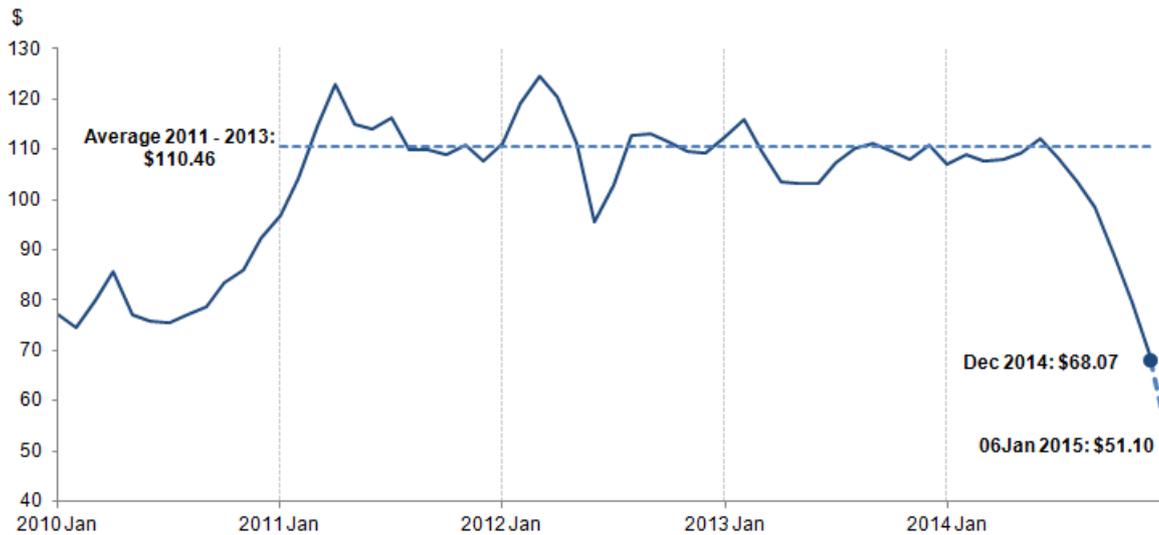
**Notes for Tax receipts, the personal allowance, and the earnings distribution**

1. A number of other tax changes also occurred during this period, such as the removal of the starting rate in 2008/09, which can be found on the gov.uk website.
2. Derived from Gross Weekly Earnings in the Labour Force Survey. Each point represents the density of employees earning within £1,250 of the amount shown in bands of £2,500. For example, at £10,000 on the x-axis, the y-axis shows the percentage of employees earning between £8,750 and £11,250.
3. All figures are in 2013/2014 prices.

## 9. The impact of lower oil prices on UK business

The rate of UK economic growth during 2013 and 2014 has been close to its pre-downturn trend. Future growth rates will depend on a number of factors, one of which may be the recent pronounced fall in world oil prices. The combination of expanding US oil production, continued strength in Middle East output, and slower demand growth as a result of subdued weaker global economic activity has seen the price of Brent crude oil fall sharply from \$112 per barrel over July 2014 to \$68 in December, before closing at \$51 on 6 January 2015 (Figure 14).

**Figure 14: Brent oil prices, \$ per barrel**



**Source: Financial Times**

### Notes:

1. Monthly figures are averages of closing price for the given month

The full direct and indirect effects resulting from changes in the oil price are difficult to assess. While it has been well documented that the lower oil price has put downward pressure on the profitability of companies involved in the extraction of crude oil, many other UK businesses are likely to benefit from the lower cost of oil inputs. The UK is now a net importer of oil products, as shown in Table 2; in 2012 exports of oil related products totalled £43.9 bn (or 8.8% total exports), a lower figure compared to imports of oil products (£64.6bn or 12.1% total imports).

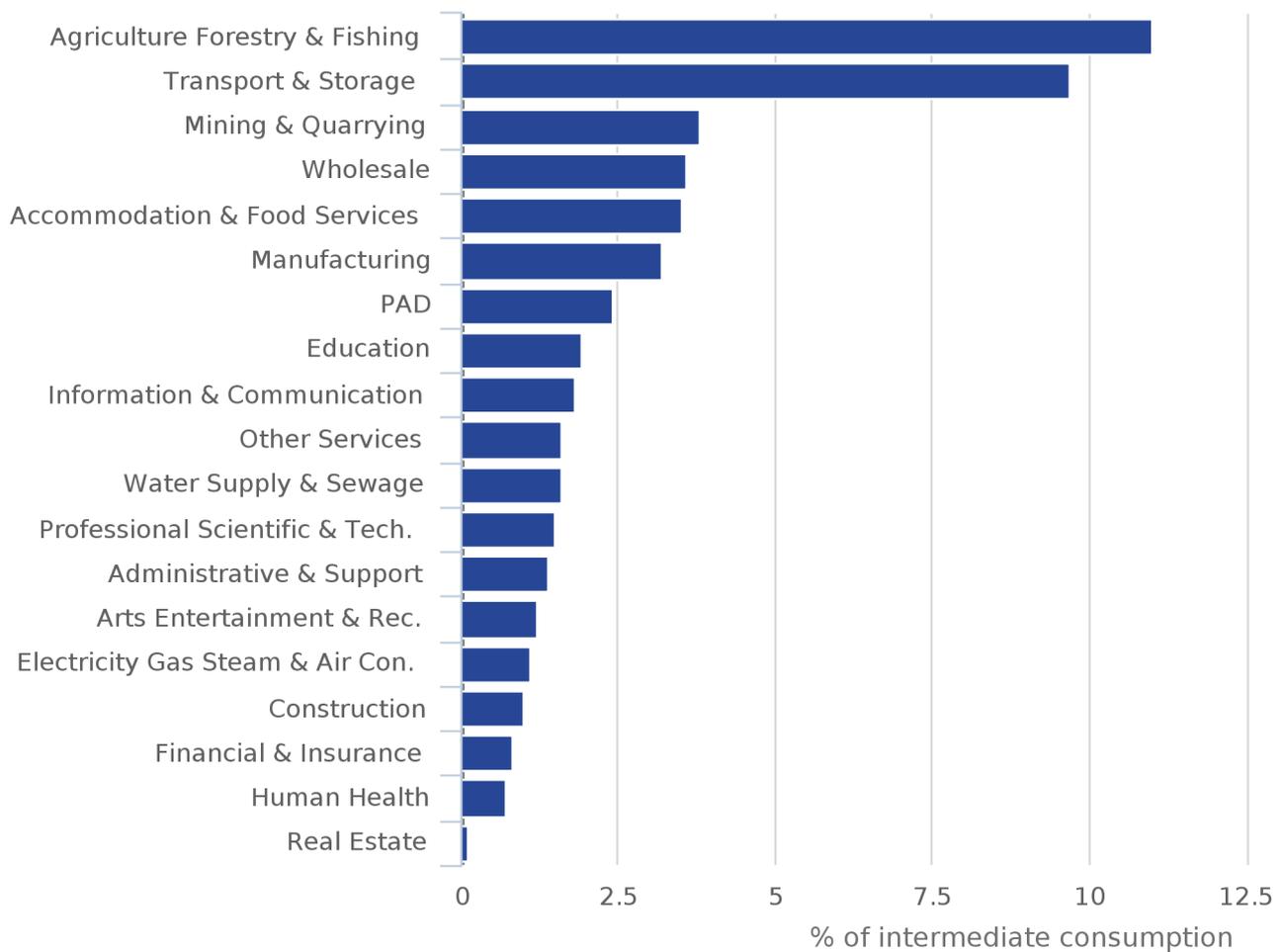
**Table 2: Exports and imports of crude and refined petroleum and related products, £bn, current price, and as a % of total export or imports, 2012**

	£bn	%	£bn	%
	Exports of oil related products	% of total exports	Imports of oil related products	% of total imports
Crude petroleum and natural gas & metal ores	22.0	4.4	39.1	7.3
Coke and refined petroleum products	21.9	4.4	25.5	4.8
<b>Total</b>	<b>43.9</b>	<b>8.8</b>	<b>64.6</b>	<b>12.1</b>

Source: Office for National Statistics

However, the extent to which lower oil input prices might benefit an industry is likely to be related to their exposure to oil products. To explore this further, Figure 15 ranks industries by the proportion of intermediate consumption attributed to coke and refined petroleum products. This shows that the agriculture, mining & quarrying, and manufacturing industries are among the most heavily reliant on coke & refined petroleum products as a proportion of their total intermediate consumption. Within services, the transport, 'wholesale & retail' and 'accommodation & food services' industries are also significant consumers of such inputs. This suggests that these industries are likely to be among the beneficiaries from lower oil prices, although the scale of any benefit may depend on possible offsets to lower oil prices arising from contractual arrangements at a company level such as fixed price and hedging agreements.

**Figure 15: Use of coke & refined petroleum products as a % of total intermediate consumption for high-level industries, 2012**



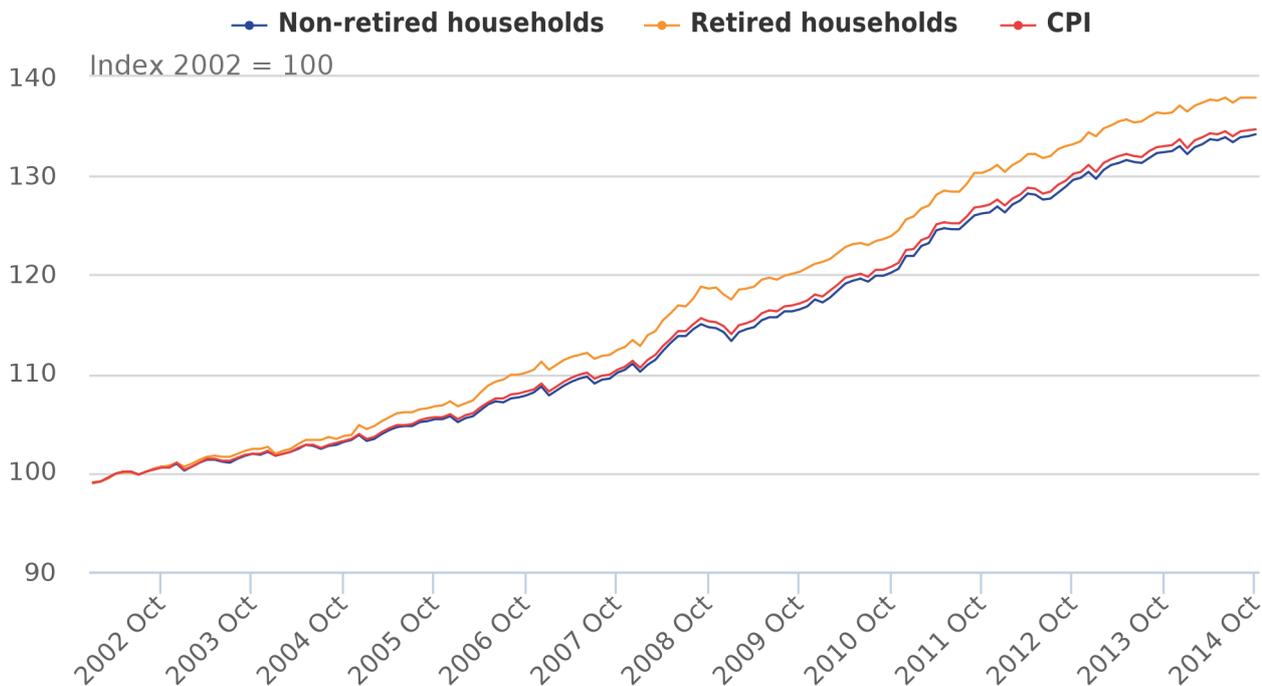
Source: Office for National Statistics

## 10. Household inflation rates

The fall in the price of oil can also be seen in the weakening of inflationary pressures experienced by households ([Economic Review - November 2014](#)). The 12-month rate for annual Consumer Prices Index (CPI) inflation in the UK has eased to 1.0% in November 2014, its lowest level in 12 years. Falling food and motor fuel prices continue to have a downward impact on the headline rate of inflation, reducing the 12-month rate by 0.4 percentage points in the year to November. Overall, food prices have fallen by 1.7% over the last year and motor fuels by 5.9%, with the average price of petrol standing at just under £1.23 per litre in November 2014, around 7 pence per litre cheaper than a year ago. It has fallen considerably since then.

While the fall in the price of oil is currently one of the main contributors to lower UK inflationary pressure, it has had a varied impact on the inflationary experience of different types of households in the UK. Recent analysis carried out by ONS looks at the inflation rates experienced by different sub-groups of the population between 2003 and 2014 ([Variation in the inflation experience of UK households - 2003-2014](#)), including retired and non-retired households. Figure 16 presents the cumulative change in the price level experienced by these sub-groups over the period January 2002 to October 2014, alongside the headline Consumer Prices Index (CPI). It is clear that the inflation rate for retired households has been above that experienced by non-retired households' throughout much of the period up to late 2009. Since then, the gap has stabilised, a result of both sub-groups alternating between experiencing higher rates of price inflation. Price changes for non-retired households broadly tracks the CPI, reflecting the larger weight of these households in the overall population.

**Figure 16: Cumulative price changes for retired and non-retired households, CPI, 2002 = 100**



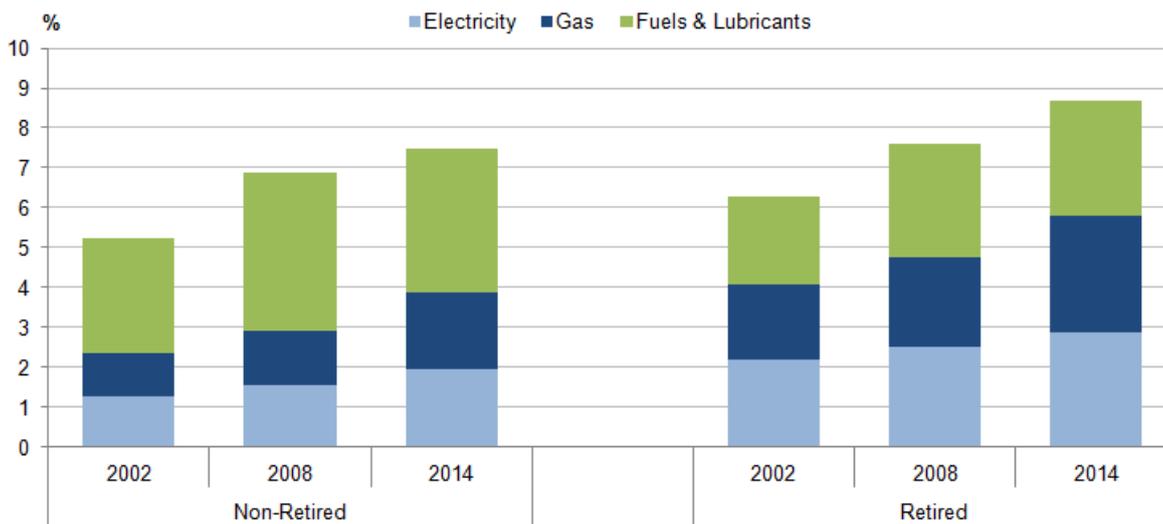
**Source: Office for National Statistics**

**Notes:**

1. Figure shows the range of cumulative price changes of products purchased by retired and non-retired households between 2002 and October 2014.

What impact have changes in the price of household energy had on the overall inflation experience of retired and non-retired households? Expenditure on energy can be split into spending on energy used in the home (electricity and gas) and energy used for the operation of cars and other vehicles by households (fuels & lubricants). Household energy expenditure defined in this way makes up an average 6.9% of total spending by non-retired households compared to 8.0% by retired households over the period 2002 – 2014, although both proportions have increased over time. Figure 17 breaks down spending on household energy bills into the contributions of its constituent parts. It is clear that non-retired households allocate a higher proportion of their expenditure to fuels & lubricants – perhaps reflecting the costs of driving to work. By comparison, retired households' spending on gas and electricity is greater as a proportion of their total expenditure.

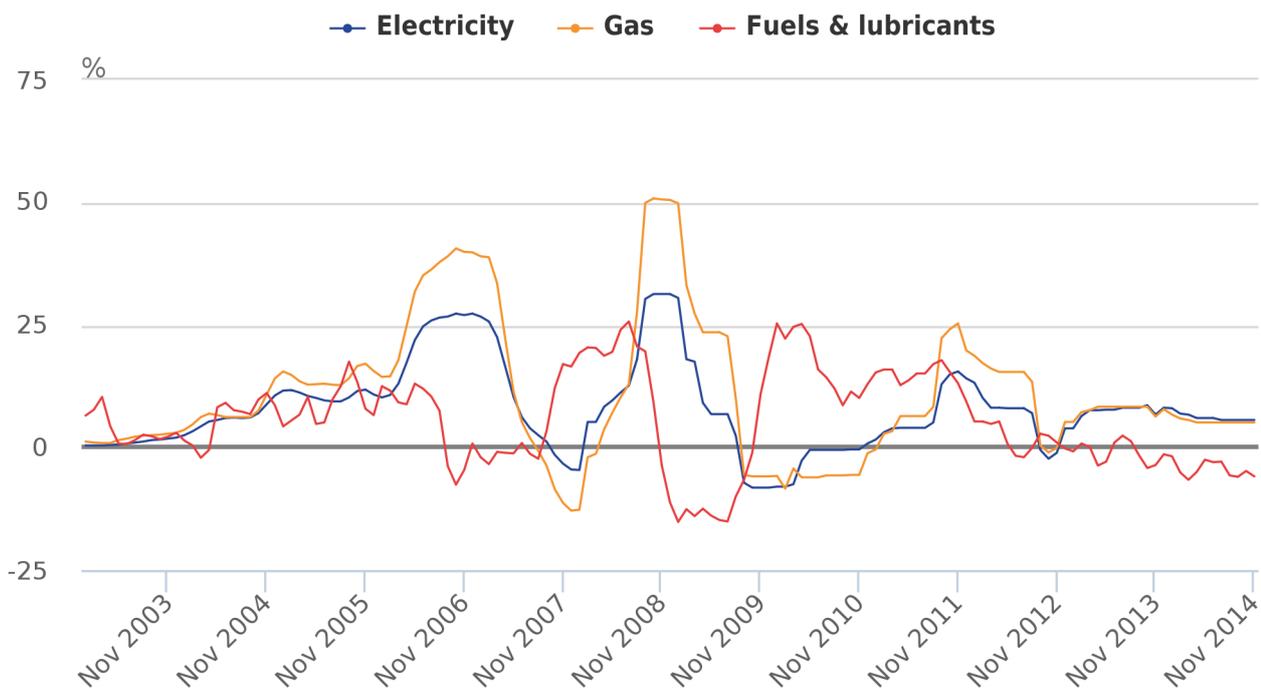
**Figure 17: Expenditure shares on electricity, gas and fuels & lubricants for retired and non-retired households, current prices; 2002, 2008, 2014, %**



Source: Office for National Statistics

The differences in the share of expenditure that retired and non-retired households attribute to each product drive the inflation differentials seen between these two groups. This is because the analysis carried out uses the population-level prices from the CPI. Due to this limitation in the data, the [paper](#) assumes that all household types face the same price changes over time. Figure 18 shows the price of the component parts of household energy bills over the period since 2003. All households experienced high costs of electricity and gas in 2007 and 2009. By comparison, the recent moderation in oil prices has led to deflation in the price of fuels & lubricants associated with motor vehicles, although it has been on a gradual downward trend since early 2010.

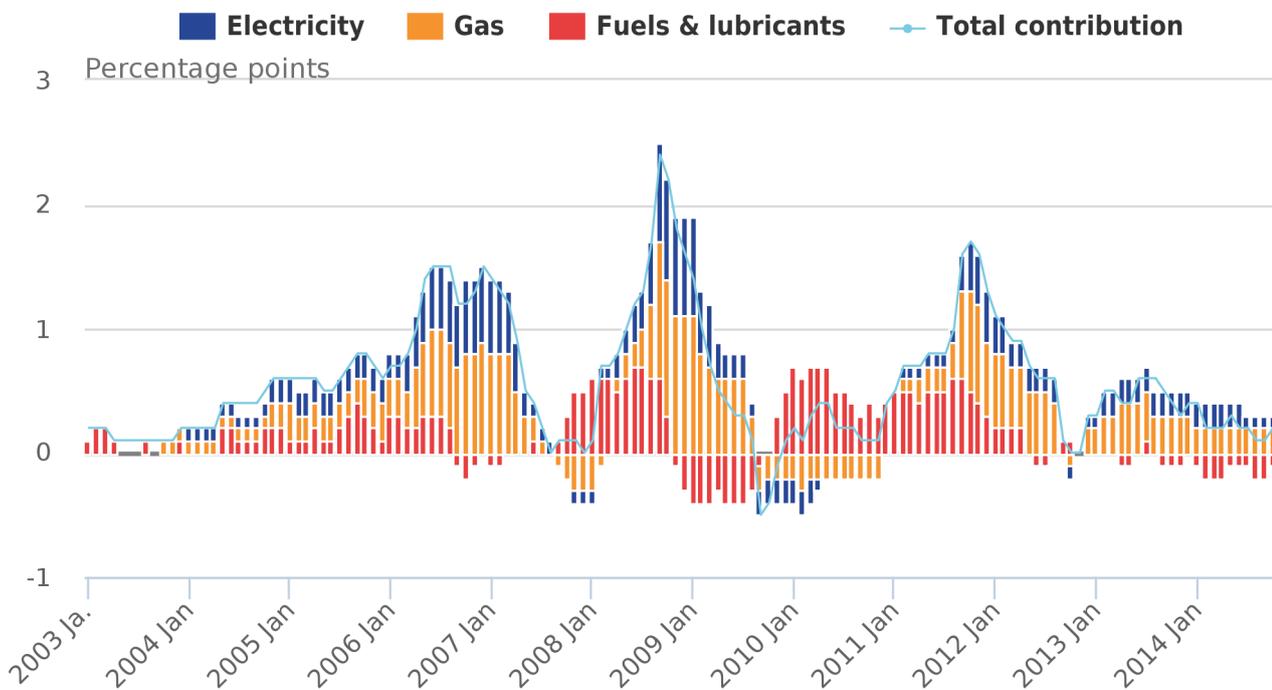
**Figure 18: 12-month inflation rate for Electricity, Gas and Fuels & Lubricants**



Source: Office for National Statistics

The paper ([Variation in the inflation experience of UK households - 2003-2014](#)) also presents the contributions to the changes in price experienced by each sub-group, and the differences between them. It finds that contributions from food & drink consistently push retired household overall price inflation above that of the non-retired. These effects are offset by smaller contributions from transport and education prices in particular. By comparison, the main reasons for the inflation rate differentials are the large, volatile contributions of electricity, gas & fuel. Here, Figure 19 below focuses on the contributions from electricity, gas and fuels & lubricants to the rate of inflation for retired households (Panel A), non-retired households (Panel B) and the difference between them (Panel C).

**Figure 19A: Contributions to inflation experienced by retired households from electricity, gas and fuels & lubricants**

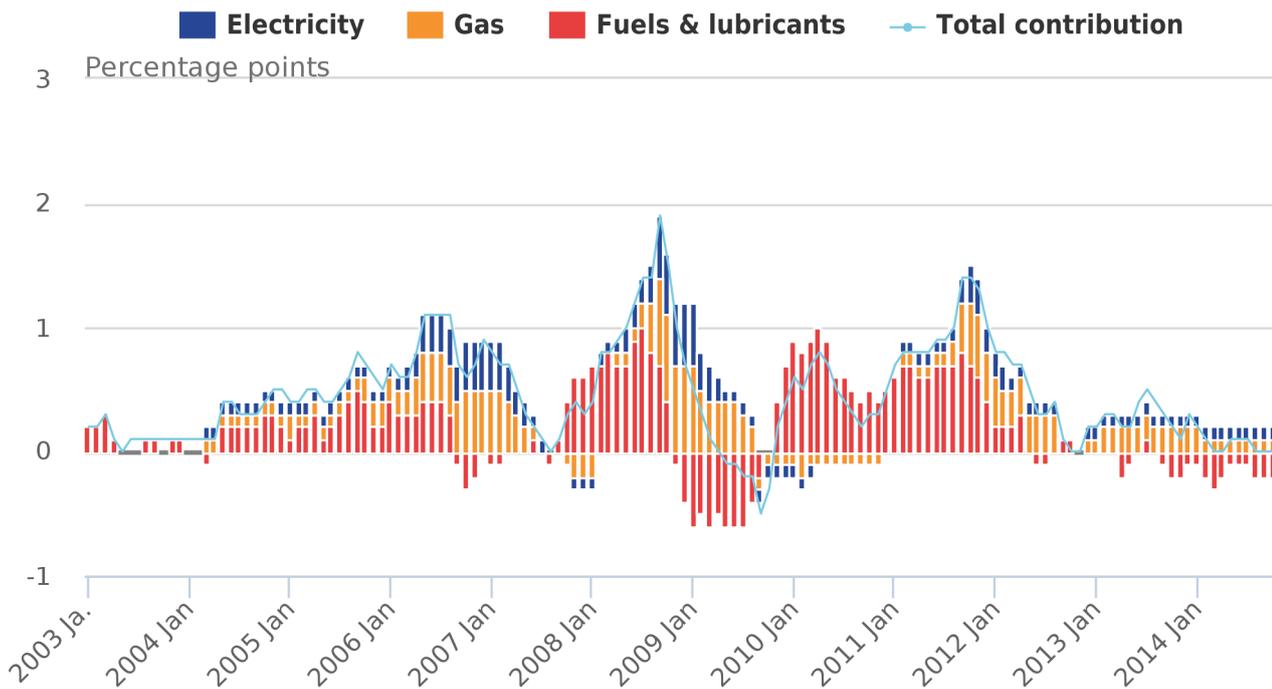


Source: Office for National Statistics

Notes:

1. Stacked bars reflect the percentage point contributions of the COICOP categories 04.5.1 Electricity, 04.5.2 Gas and 07.2.2 Fuels & Lubricants. Note that a reduction in the contribution of series to the annual rate of change need not imply falling prices, but could also reflect a lower rate of increase.

**Figure 19B: Contributions to inflation experienced by non-retired households from electricity, gas and fuels & lubricants**

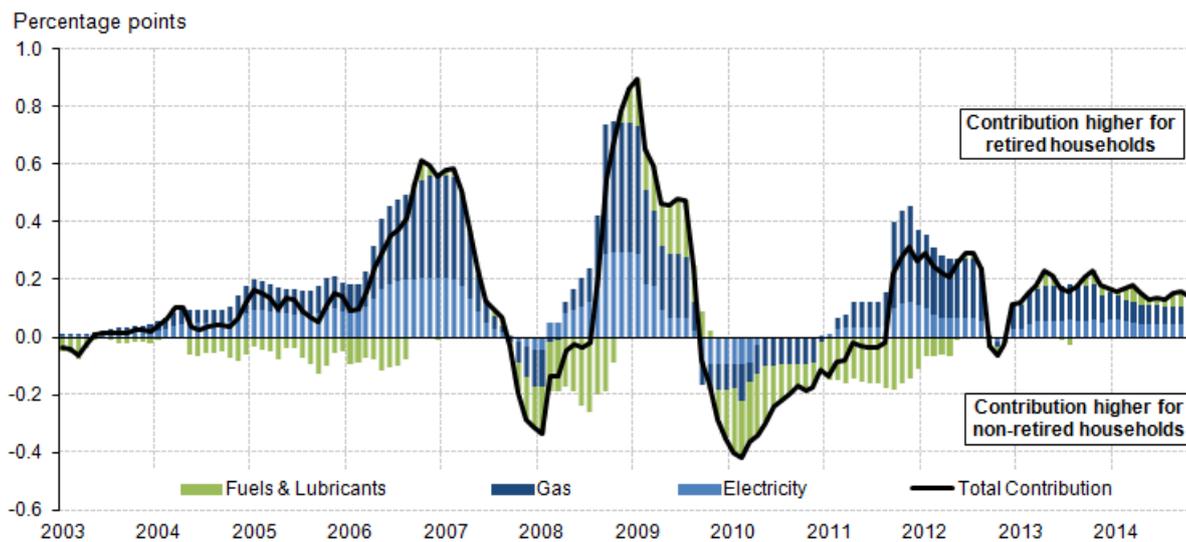


Source: Office for National Statistics

Notes:

1. Stacked bars reflect the percentage point contributions of the COICOP categories 04.5.1 Electricity, 04.5.2 Gas and 07.2.2 Fuels & Lubricants. Note that a reduction in the contribution of series to the annual rate of change need not imply falling prices, but could also reflect a lower rate of increase.

**Figure 19C: Contributions to the difference in inflation from electricity, gas and fuels & lubricants: retired households less non-retired households: percentage points**



Source: Office for National Statistics

**Notes:**

1. Stacked bars reflect the percentage point contributions of the COICOP categories 04.5.1 Electricity, 04.5.2 Gas and 07.2.2 Fuels & Lubricants. Note that a reduction in the contribution of series to the annual rate of change need not imply falling prices, but could also reflect a lower rate of increase.

Taken together, the three panels indicate that in general, household energy (electricity and gas) acts to increase the rate of price increases for retired households. Fuels & lubricants instead act to reduce price increases for the retired by comparison with non-retired households. However, there are three periods that differ from this trend; 2009, 2010 and 2013 onwards.

Figure 18 above shows that in 2009, the 12-month growth rate of fuel & lubricant prices fell sharply compared with household energy (corresponding to the fall in oil prices around 2009). A similar pattern has been seen since the beginning of 2013. By comparison, 2010 saw the 12-month growth rate of fuels and lubricants recover but household energy fall sharply. These respective falls in the 12-month growth rate of prices result in both groups seeing a negative contribution from fuels & lubricants in 2009 and since 2013, and household energy in 2010. However, the respective size of these contributions is different because of the different weightings accorded by each group to the class-level categories, as shown in Figure 17. Non-retired and retired households see a larger negative contribution from fuel & lubricants and household energy respectively, due to their larger expenditure shares on these goods. This leads to the patterns seen in Panel C, and shows the varied impact of changes in the price of energy on different types of households in the UK.

## 11. Reference tables

**Table 3: UK demand side indicators**

	2012	2013	2014	2014	2014	2014	2014	2014	2014	2014
			Q1	Q2	Q3	Aug	Sep	Oct	Nov	
<b>GDP<sup>1</sup></b>	0.7	1.7	0.6	0.8	0.7	:	:	:	:	
<b>Index of Services</b>										
All Services <sup>1</sup>	2.0	1.9	0.8	1.0	0.8	0.0	0.5	0.3	:	
Business Services & Finance <sup>1</sup>	3.0	2.5	0.8	1.3	1.0	-0.4	0.8	0.4	:	
Government & Other <sup>1</sup>	1.4	0.3	0.3	0.4	0.2	0.1	0.0	0.2	:	
Distribution, Hotels & Rest. <sup>1</sup>	1.5	3.5	1.6	1.0	0.7	0.4	0.5	0.2	:	
Transport, Stor. & Comms. <sup>1</sup>	1.4	1.4	0.6	1.5	1.2	0.2	0.5	0.6	:	
<b>Index of Production</b>										
All Production <sup>1</sup>	-2.7	-0.5	0.4	0.2	0.2	-0.2	0.7	-0.1	:	
Manufacturing <sup>1</sup>	-1.3	-0.7	1.1	0.5	0.3	0.1	0.6	-0.7	:	
Mining & Quarrying <sup>1</sup>	-10.8	-2.5	-0.1	0.1	-1.6	-1.8	3.4	2.0	:	
<b>Construction<sup>1</sup></b>	-7.5	1.4	2.0	1.7	1.6	-3.0	2.2	-2.2	:	
<b>Retail Sales Index</b>										
All Retailing <sup>1</sup>	0.8	1.4	0.7	1.6	0.3	0.3	-0.3	1.0	1.6	
All Retailing, excl.Fuel <sup>1</sup>	1.2	2.0	0.5	1.9	0.5	0.3	-0.2	1.0	1.7	
Predom. Food Stores <sup>1</sup>	-0.1	-0.2	-1.3	1.5	-0.5	-0.7	0.4	0.4	0.4	
Predom. Non-Food Stores <sup>1</sup>	1.4	1.8	2.2	1.2	1.7	1.5	-1.5	2.0	2.6	
Non-Store Retailing <sup>1</sup>	9.4	18.0	1.2	7.7	-1.4	-1.9	4.4	-1.3	3.8	
<b>Trade</b>										
Balance <sup>2, 3</sup>	-34.5	-33.7	-10.3	-9.2	-9.0	-2.5	-2.8	-2.0	:	
Exports <sup>4</sup>	0.3	3.0	-1.3	-1.0	0.2	-1.6	2.6	0.5	:	
Imports <sup>4</sup>	2.3	2.7	-1.1	-1.7	0.1	-4.0	3.1	-1.3	:	
<b>Public Sector Finances</b>										
PSNB-ex <sup>3,5</sup>	12.0	-23.9	-3.7	1.1	0.6	0.0	0.5	-0.6	-1.6	
PSND-ex as a % GDP	76.7	79.1	78.9	79.7	79.6	79.0	79.6	79.2	79.5	

Source: Office for National Statistics

Notes:

1. Percentage change on previous period, seasonally adjusted, CVM

2. Levels, seasonally adjusted, CP

3. Expressed in £ billion

4. Percentage change on previous period, seasonally adjusted, CP

5. Public Sector net borrowing, excluding public sector banks. Level change on previous period a year ago, not seasonally adjusted

**Table 4: UK supply side indicators**

	2012	2013	2014	2014	2014	2014	2014	2014	2014	2014
			Q1	Q2	Q3	Aug	Sep	Oct	Nov	
<b>Labour Market</b>										
Employment Rate <sup>1, 2</sup>	71.0	71.5	72.5	72.8	73.0	73.0	73.0	73.0	73.0	:
Unemployment Rate <sup>1, 3</sup>	8.0	7.6	6.8	6.3	6.0	6.0	6.0	6.0	6.0	:
Inactivity Rate <sup>1, 4</sup>	22.8	22.4	22.1	22.1	22.2	22.2	22.3	22.3	22.3	:
Claimant Count Rate <sup>7</sup>	4.7	4.2	3.5	3.2	2.9	2.9	2.8	2.8	2.8	2.7
Total Weekly Earnings <sup>6</sup>	£469	£475	£477	£479	£480	£479	£482	£483	£483	:
<b>CPI</b>										
All-item CPI <sup>5</sup>	2.8	2.6	1.7	1.7	1.5	1.5	1.2	1.3	1.3	1.0
Transport <sup>5</sup>	2.3	1.0	-0.3	1.0	0.8	1.2	0.1	0.5	0.5	-0.2
Recreation & Culture <sup>5</sup>	0.2	1.1	0.6	1.0	1.2	1.4	0.7	1.0	1.0	0.3
Utilities <sup>5</sup>	5.0	4.1	3.3	3.2	3.1	3.2	3.1	3.2	3.2	3.3
Food & Non-alcohol. Bev. <sup>5</sup>	3.2	3.8	1.8	0.0	-0.9	-1.1	-1.4	-1.4	-1.4	-1.7
<b>PPI</b>										
Input <sup>8</sup>	1.3	1.2	-5.0	-4.6	-7.4	-7.5	-7.4	-8.4	-8.4	-8.8
Output <sup>8</sup>	2.1	1.3	0.6	0.5	-0.3	-0.3	-0.5	-0.5	-0.5	-0.1
<b>HPI<sup>8</sup></b>										
	1.7	3.5	7.9	10.2	11.8	11.7	12.1	10.4	10.4	:

Source: Office for National Statistics

**Notes:**

1. Monthly data shows a three month rolling average (e.g. The figure for October is for the three months Aug - Oct)
2. Headline employment figure is the number of people aged 16-64 in employment divided by the total population 16-64
3. Headline unemployment figure is the number of unemployed people (aged 16+) divided by the economically active population (aged 16+)
4. Headline inactivity figure is the number of economically active people aged 16 to 64 divided by the 16-64 population
5. Percentage change on previous period a year ago, seasonally adjusted
6. Estimates of total pay include bonuses but exclude arrears of pay (£)
7. Calculated by JSA claimants divided by claimant count plus workforce jobs
8. Percentage change on previous period a year ago, non-seasonally adjusted

## 12. Background notes

1. 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)