March 2016

UK Economic Outlook

The UK economic recovery: Better balanced than you might think

Which industries will drive future jobs growth in the UK?

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Contents

Highlights and key messages for business and public policy

- The UK economy slowed a little in 2015 but domestic demand growth remains relatively strong, helped by lower oil prices. The global outlook remains mixed with a gradual pick-up in the US and the Eurozone, but a slowdown in China, continued recessions in Russia and Brazil, and increased volatility in emerging economies and financial markets more generally.

- In our main scenario we expect UK GDP growth to average around 2.2-2.3% in both 2016 and 2017. Consumer spending and business investment will be the main drivers of UK growth in these years.

- Risks to growth are weighted somewhat to the downside in the short term due to international risks, particularly in relation to emerging markets, as well as uncertainties relating to the EU referendum. But there are also upside possibilities if the global environment improves and productivity growth rates accelerate in the UK.

- London continues to lead the recovery with projected growth of around 3% in 2016 but all other UK regions should also register positive real growth of around 1.4-2.3% per annum this year.

- Inflation will remain low this year but seems likely to rise back towards its 2% target by the end of 2017, so the MPC may start to raise interest rates gradually during the course of 2017 and beyond. But this now seems likely to be a very slow process and rates could still be only around 2% in 2020.

- The Budget is likely to confirm plans for further fiscal tightening to eliminate the budget deficit before the end of this decade. This will impose some drag on the UK economy, but the private services sector should be strong enough to offset this in terms of GDP and jobs growth.

Key projections

	2016	2017
Real GDP growth	2.2%	2.3%
Consumer spending growth	3.0%	2.5%
Inflation (CPI)	0.5%	1.6%

Source: PwC main scenario projections

The UK economic recovery: Better balanced than you might think

- Some commentators have expressed concerns about the balance of the UK economic recovery to date, but Andrew Sentance argues in this report that this is not backed up by the facts on growth since mid-2009. These data instead show strong positive contributions to UK growth from business investment and exports as well as, since early 2013, consumer spending.

- The UK recovery has been weaker so far than after some past recessions, but compares reasonably well to other G7 economies since the global financial crisis, particularly in terms of employment growth.

Jobs growth of 3 million projected by 2025

- Employment in the UK could grow by around 3 million by 2025, with the total number of jobs reaching almost 37 million.

- Education and health could add over 1 million jobs by 2025 and become the biggest of the services sectors.

- Business services could create around 1.5 million more jobs by 2025 and will become the second biggest services sector, with distribution, hotels and restaurants in third place.

- The number of jobs in manufacturing could fall by a further 600,000 to around 2 million by 2025 as new automated technologies continue to boost productivity and overseas competition remains fierce. But this should be far outweighed by the growth in private sector services jobs.

1 – Summary

Recent developments

The UK economy grew by just under 3% in 2014, which was the fastest rate seen since 2006 and the strongest growth rate in the G7, but this eased to 2.2% in 2015 as global growth moderated.

UK domestic demand growth has remained relatively strong, however, driven by rising employment, the benefits of lower global oil prices for UK consumers (and many businesses) and, related to this, some pick-up in real earnings growth in 2015.

UK growth continues to be driven primarily by services, with manufacturing growth having stalled over the past year and construction trends being erratic.

The rate of consumer price inflation (CPI) has remained close to zero in recent months as commodity prices have generally remained weak, partly due to relatively subdued global demand growth. The latter has also been a factor in causing the Bank of England to hold off from interest rate rises in recent months. The US Federal Reserve did raise rates slightly in December, but now seems to be putting off further rate rises due to perceived global risk factors.

Table 1.1: Summary of UK economic prospects

Indicator (% change on previous year)	OBR forecasts (November 2015)		Independent forecasts (February 2016)		PwC Main scenario (March 2016)	
	2016	2017	2016	2017	2016	2017
GDP	2.4	2.5	2.2	2.2	2.2	2.3
Consumer spending	2.6	2.3	2.6	2.2	3.0	2.5

Source: Office for Budget Responsibility (November 2015), HM Treasury survey of independent forecasts (average values in February 2016 survey) and latest PwC main scenario.

Future prospects

As shown in Table 1.1, our main scenario is for UK GDP growth to average around 2.2-2.3%% in both 2016 and 2017. This is broadly similar to the latest average of independent forecasts although slightly lower than the OBR forecasts made last November.

Consumer spending growth is projected to be somewhat stronger than overall GDP growth at around 3% in 2016, with a boost from lower oil prices and increased real earnings growth, but it may slow gradually in later years as households become reluctant to further reduce their savings ratios.

We expect reasonably strong business investment growth in 2016 and 2017, but there are some potential downside risks with this projection. Business confidence could be affected by increased international market volatility relating to China and other emerging markets, as well as continuing uncertainties relating to conflicts in the Middle East and the planned referendum on UK membership of the EU. But the domestic outlook still seems reasonably favourable for UK business investment.

As always there are many uncertainties surrounding our growth projections, as illustrated by the alternative scenarios in Figure 1.1. There are still considerable downside risks relating to international developments and possibly also the EU referendum, but there are also upside possibilities if these problems can be contained and a virtuous circle of rising confidence and spending can be established as in past economic recoveries.

Inflation will remain low this year, but could rebound to close to its 2% target by the end of 2017 assuming there is no repeat of past falls in global energy and food prices. There could be upside risks to this inflation outlook in the longer term if domestic wages continue to recover without a corresponding rise in productivity.

We do not expect any early rise in official UK interest rates, but a gradual upward trend still seems likely from 2017 onwards. However, the Monetary Policy Committee seems to want to proceed very cautiously on this, so official interest rates could still be only around 2% by 2020. This could boost consumer borrowing and spending in the short term, but might lead to the build-up of asset price bubbles and other financial market distortions in the longer term.

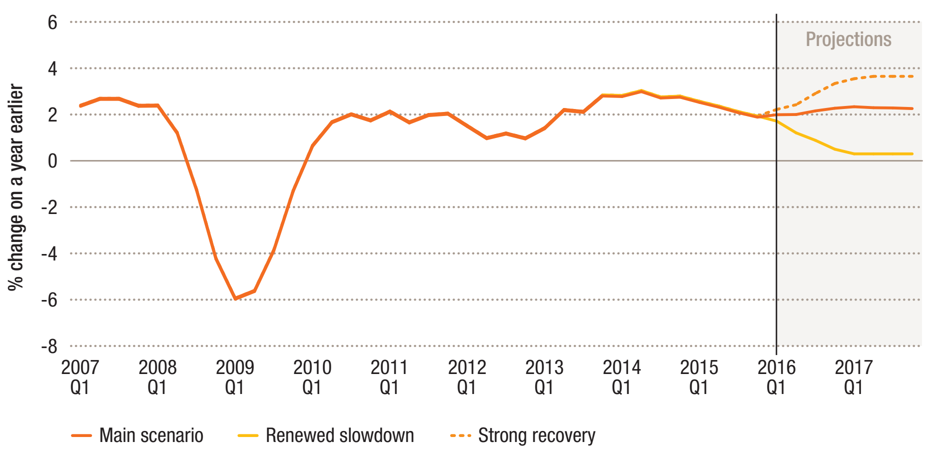
The budget deficit is falling gradually, but our projections suggest that it could overshoot OBR forecasts both this fiscal year and in the medium term, although not by a huge margin. The Chancellor is therefore likely to deliver another tough Budget on 16th March, though we would not expect radical changes to the tax and spending plans he announced last year.

The UK economic recovery: Better balanced than you might think

We are now nearly seven years into the UK economic recovery from its low point in Q2 2009, so it seems timely to take stock of what kind of recovery this has been to date. Andrew Sentance, our senior economic adviser, takes a detailed look at this question in Section 3 of this report, with the following main conclusions:

- UK economic growth since the financial crisis has been disappointing relative to past recoveries, but not in relation to other G7 economies.
- The main reason for relatively weak growth since 2009 was sluggish consumer spending in the period to 2012, when households where hit by a "perfect storm" of rising VAT, high food and energy prices, and tough lending restrictions from banks. However, consumer spending growth has been stronger since 2013 as these headwinds eased and food and energy prices fell back.
- Global headwinds do not seem to be responsible for subdued growth. The export contribution to UK growth has been broadly in line with historical trends and previous recovery periods.
- Business investment has also rebounded reasonably strongly since mid-2009 after being hit hard by the recession (although it did falter in late 2015 according to preliminary ONS estimates).
- Looking ahead, a key risk is that this relatively well balanced recovery does not last, particularly against the background of extremely low interest rates. However, the record to date gives grounds for cautious optimism.

Figure 1.1 – Alternative UK GDP growth scenarios



Source: PwC based on latest ONS data

UK could generate 3 million extra jobs by 2025, led by services

The dominant story of the last century has been the rise of services to its current position as the source of over 80% of total UK employment. Manufacturing now accounts for less than 10% of UK jobs and there is little prospect of this reversing, while health and education and business services have been the biggest growth areas for jobs since the late 1970s.

Looking ahead, our analysis in Section 4 of this report (as summarised in Table 1.2) suggests that over the next decade:

- Employment in the UK could grow by around 3 million by 2025, with the total number of jobs reaching almost 37 million.
- Education and health could add over 1 million jobs by 2025 and become the biggest of the services sectors.
- Business services could create around 1.5 million more jobs by 2025 and become the second biggest services sector, with distribution, hotels and restaurants in third place.
- The number of jobs in manufacturing could fall by a further 600,000 to around 2 million by 2025 as new automated technologies continue to boost productivity and overseas competition remains fierce.
- Around 150,000 jobs could be lost in public administration, defence and social security as austerity measures continue at least until 2020.

Table 1.2: UK employment growth rates 1997-2015 and 2015-2025

	Number of jobs (millions)			Growth rates (per annum)	
Industry	1997	2015	2025 (projected)	1997-2015	2015-2025 (projected)
Agriculture, forestry & fishing	0.5	0.4	0.4	-0.9%	-0.9%
Construction	1.8	2.2	2.4	1.1%	0.6%
Manufacturing	4.3	2.6	2.0	-2.6%	-2.6%
Energy and water	0.3	0.4	0.4	0.8%	0.8%
Distribution, hotels and restaurants	6.6	7.2	7.5	0.5%	0.5%
Transport and communication	2.2	2.9	3.2	1.6%	1.2%
Financial services	1.1	1.1	1.2	0.2%	0.2%
Business services	3.9	6.3	7.9	2.8%	2.3%
Public administration, defence and security	1.6	1.5	1.3	-0.4%	-1.0%
Education and health	5.0	7.1	8.3	2.0%	1.5%
Other services	1.5	1.9	2.2	1.5%	1.5%
Total services	21.8	28.0	31.6	1.4%	1.2%
Total Jobs	**28.8**	**33.7**	**36.9**	**0.9%**	**0.9%**

Source: PwC projections and ONS historical data

2 – UK Economic prospects

Key points

- The UK economy has continued its pattern of steady services-led growth over the past year, although the pace of expansion has moderated.

- In our main scenario, we project the UK economy to grow at around 2.2-2.3% in both 2016 and 2017, down from its recent peak of 2.9% in 2014, but still one of the strongest performances in the G7 along with the US.

- Consumer spending growth is projected to be around 3% in 2016, boosted by rising employment and positive real earnings growth as inflation remains very low. We expect some moderation in real consumer spending growth later as the inflation effect fades, but it should remain relatively strong at around 2.5% in 2017.

- Business investment is projected to be the other main driver of UK growth in 2016-17, although uncertainty surrounding the EU referendum is a downside risk here.

- Service sector growth has led the way since the recovery began in mid-2009 and this will continue in 2016-17. Manufacturing has weakened due to continued sluggish growth in the euro area and other key export markets, while construction growth has been volatile.

- We project that London will be the fastest growing region in 2016 with an output increase of around 3%. Most other UK regions are expected to see positive growth of around 1.7-2.3% in 2016, but Northern Ireland will continue to lag behind somewhat with projected growth of 1.4%.

- The UK recovery is still exposed to downside global risks related to possible problems in China and some other large emerging economies leading to further volatility and weakness in international financial markets. However, there are also upsides including the continued feedthrough to consumers of the benefits of low oil prices and the possibility of further significant jobs growth.

- The Bank of England seems likely to keep interest rates at their record low of 0.5% for some time, with very gradual increases now not expected to begin until 2017. This should help to support consumer spending and business investment in the short term, but could add to the risk of asset price bubbles in the longer term.

- The budget deficit has been on a gradual decreasing trend, but could overshoot the OBR's projections somewhat both this year and in the medium term. The Chancellor is therefore likely to deliver another tough Budget on 16th March.

Introduction

In this section of the report we describe recent developments in the UK economy and review future prospects. The discussion covers:

Section 2.1	Recent developments and the present situation
Section 2.2	Economic growth prospects: national, sectoral and regional
Section 2.3	Outlook for inflation and real earnings growth
Section 2.4	Monetary and fiscal policy options
Section 2.5	Summary and conclusions

2.1 Recent developments and the present situation

The UK's recovery has slowed from 2.9% in 2014 to 2.2% in 2015, but remains close to its long term trend rate. This slowdown reflects sluggish global growth as well as the fact that unemployment has now fallen back to pre-crisis levels of around 5%, so there is less spare capacity in the economy.

We should take a long-term perspective on this, however, and looking at the recovery period as a whole since mid-2009 (see Figure 2.1) we see two main periods:

- an initial period from Q3 2009 to the end of 2012 when growth was relatively sluggish at around 1.5% per annum, held back by a mixture of consumer and business caution, problems in the euro area and the UK fiscal consolidation; and
- a period from early 2013 onwards when the euro area crisis eased, business and consumer confidence revived and domestic demand growth picked up accordingly, leading to stronger growth averaging around 2.5% up to the end of 2015. Import growth has outpaced export growth over this second period, however, contributing to a widening current account deficit (although the latter was more due to a decline in net investment income from abroad than changes in trade balances)[1].

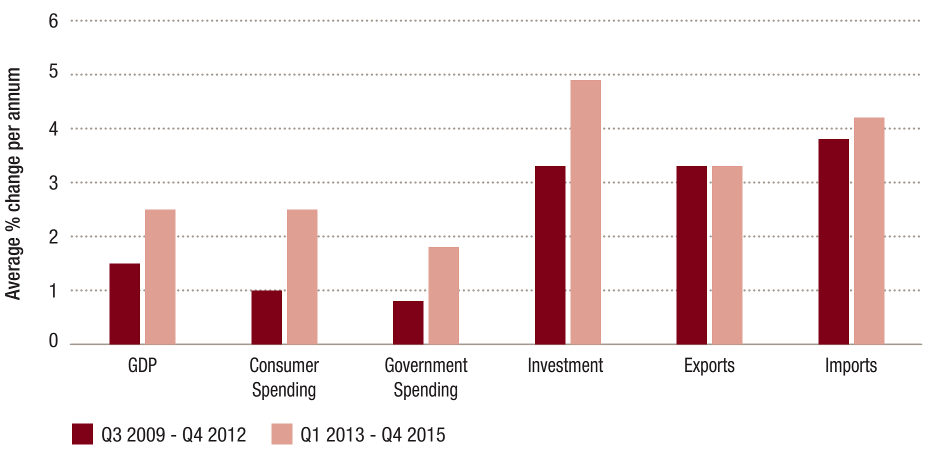
A more detailed discussion of the balance of the recovery to date is provided by Andrew Sentance, PwC's senior economic adviser, in Section 3 of this report.

Services continue to lead the way

Manufacturing output has been gradually decreasing over the past 12 months, following a relatively flat period since early 2011 (see Figure 2.2).

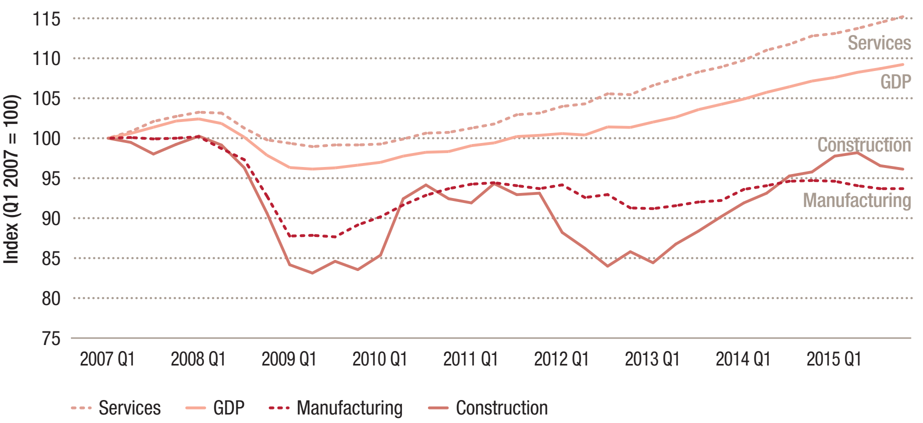
Output in the construction industry has been volatile in recent years, with a period of relatively strong growth from early 2013 to mid-2015 followed by a renewed decline in the second half of 2015 according to official data. This may partly reflect some cooling of the earlier recovery in housebuilding, as well as a moderation in civil engineering activity. However, figures from the Construction Purchasing Managers' Index (PMI) have generally remained stronger than the official data through 2015 and signal continued growth into early 2016, albeit at a slower pace than before.

Figure 2.1 – Two phases of UK economic recovery



Source: ONS

Figure 2.2 – Sectoral output and GDP trends



Source: ONS

1 The current account deficit was discussed in more detail in the November 2015 issue of this report, with the conclusion that it was not yet a major source of concern, but did need to be monitored for any signs of further deterioration. It could also be a source of future sterling weakness.

Services, however, is the key sector for the UK economy and has generally seen much stronger and steadier growth since 2009 than either manufacturing or construction, as Figure 2.2 shows. This has been associated with exceptionally strong jobs growth in services, particularly since 2012, as discussed in more detail in Section 4 below.

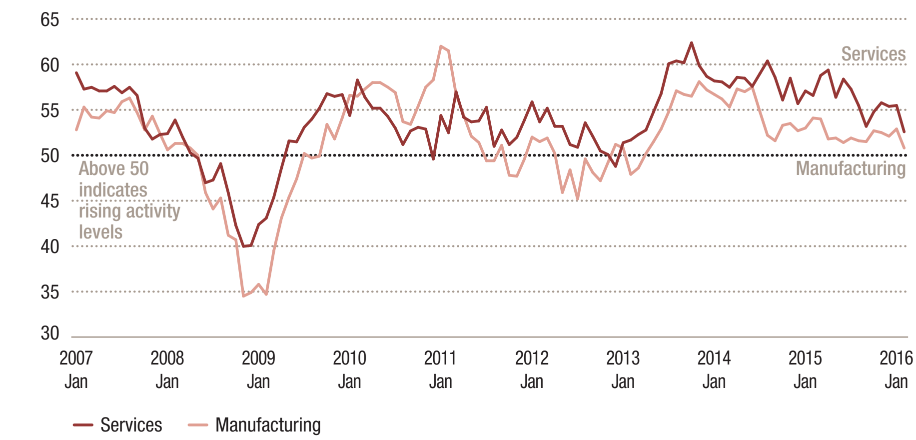
The latest Markit/CIPS Purchasing Managers' Indices (Figure 2.3) show both manufacturing and services remaining above 50, indicating rising levels of activity, but both are down from their peak levels in 2014. As with official output data, the PMI indices see services growth as being consistently stronger than manufacturing and still sufficiently high to keep the domestic UK recovery going through early 2016.

Jobs growth remains stronger than productivity

As noted above, jobs growth has been very strong in the UK for the past three years with the unemployment rate falling back to pre-crisis levels of around 5%. However, this has been at the expense of relatively muted productivity growth over this period, as shown in Figure 2.4.

Andrew Sentance, our senior economic adviser, looked in detail at the reasons for this in the July 2015 edition of UK Economic Outlook, highlighting the factor that this was largely driven by weakness in productivity growth in the financial services, energy and public sectors. Other private services sectors and manufacturing have shown stronger productivity growth since mid-2009[2].

Figure 2.3 – Purchasing Managers' Indices of business activity



Source: Markit/CIPS

Figure 2.4 – Employment rising strongly but productivity has been weaker

Source: ONS

2 See full article at: http://www.pwc.co.uk/services/economics-policy/insights/uk-economic-outlook/ukeo-july-15-summary.html

Consumer confidence and retail sales remain relatively robust, but stock markets weaker

Consumer confidence, as measured by PwC's own regular survey, reached its highest level for nearly 10 years in January 2016 as shown in figure 2.5. Together with strong employment and the continued strength in real earnings, retail sales volume growth also picked up again in January, though price pressures remain very subdued both on the high street and online.

Stock markets experienced some volatile movements during 2015 and weakened further in early 2016 as Figure 2.6 shows. The Shanghai market has been particularly volatile with a bubble emerging in mid-2015 and then bursting. Euronext 100 and FTSE 100 have fallen back below their pre-crisis levels though the US market remains stronger despite some recent falls.

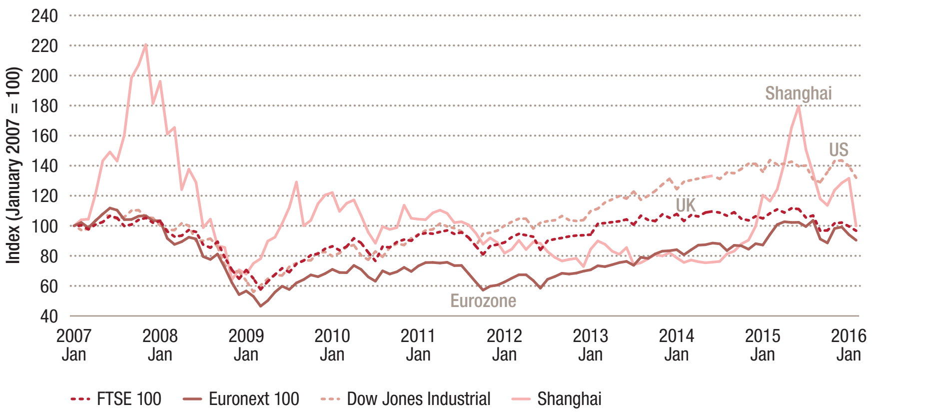
As we showed in past research[3], however, there is limited empirical evidence of a close link between UK stock market trends and real UK economic growth (though the relationship is closer in the US). This partly reflects the fact that the FTSE index has a high weighting of international companies whose fortunes are more linked to the global than the UK economy. This has been particularly true recently of mining and oil and gas stocks that have weakened with global commodity price falls since mid-2014. Such price falls are, however, good news for UK consumers who have more money left in their pocket to spend after paying for domestic energy and petrol bills.

Of course, developments in China and other emerging markets need to be monitored carefully for any signs that problems are escalating, as do trends in financial markets. But the importance of stock market fluctuations for the health of the real economy in the UK should not be overstated.

Figure 2.5 – Consumer confidence and retail sales

Sources: PwC Consumer survey, ONS data for retail sales

Figure 2.6 – Equity market indices



Source: Thomson Reuters Datastream

3 See our analysis at: http://www.pwc.co.uk/services/economics-policy/insights/stock-markets-and-the-real-economy.html

2.2 Economic growth prospects: national, sectoral and regional

Since the last UK Economic Outlook in November we have revised down our main scenario for UK growth slightly but we still expected reasonably stable growth of around 2-2.5% per annum in 2016-17 as summarised in Table 2.1.

We expect the annual growth rate of consumer spending to remain strong at around 3% in 2016 just as it was in 2015. We then expect it to moderate somewhat in 2017 and beyond, however, as households become more reluctant to run down their savings ratio further to keep spending growth going. Nonetheless, with employment continuing to rise, consumer spending growth should continue to be an important contributor to UK growth for the next few years.

Business investment growth should also remain relatively strong barring any very significant deterioration in the global economic outlook. Uncertainties surrounding the EU referendum represent a potential dampening factor here, however, particularly as regards foreign direct investment to the UK in the event of a vote to leave the EU in June. We treat this as a downside risk to our main scenario, but one for which businesses should make appropriate contingency plans.

Government consumption remains moderate though still positive in real terms, given that future fiscal consolidation will proceed at a relatively modest pace and will now partly be achieved through tax rises rather than spending cuts following the Chancellor's decisions last year.

Table 2.1 - PwC main scenario for UK growth and inflation

% real annual growth unless stated otherwise	2015	2016p	2017p
GDP	2.2%	2.2%	2.3%
Consumer spending	3.0%	3.0%	2.5%
Government consumption	1.6%	1.6%	1.1%
Fixed investment	4.2%	3.1%	4.5%
Domestic demand	2.7%	2.6%	2.5%
Net exports (% of GDP)	-0.5%	-0.6%	-0.2%
CPI inflation (%: annual average)	0.0%	0.5%	1.6%

Source: ONS for 2015, PwC main scenario projections for 2016-17

Table 2.2: Official and independent forecasts

(% real YoY growth unless stated otherwise)	Latest estimates	OBR forecasts (November 2015)		Average independent forecast (Feb 2016)	
	2015	2016	2017	2016	2017
GDP	2.2%	2.4%	2.5%	2.2%	2.2%
Manufacturing output	-0.2%	N/A	N/A	0.7%	1.7%
Consumer spending	3.0%	2.6%	2.3%	2.6%	2.2%
Fixed investment	4.2%	5.4%	5.1%	4.0%	4.1%
Government consumption	1.6%	0.4%	0.6%	1.0%	0.4%
Domestic demand	2.7%	2.6%	2.5%	2.4%	2.2%
Exports	5.0%	3.4%	3.5%	3.2%	4.3%
Imports	6.2%	3.9%	3.4%	3.9%	4.0%
Current account (£bn)	-80	-79	-59	-76	-66
Unemployment claimant count (Q4, m)	0.8	0.8	0.8	0.8	0.7

Source: ONS for 2015 estimates, OBR Economic and Fiscal Outlook (November 2015), HM Treasury survey of independent forecasters (February 2016).

UK net exports again made a negative contribution to GDP growth in 2015 and we would expect this to continue in 2016, although it should fade in 2017 as we are assuming a gradual revival in growth in the US and the euro area in that year, helped by a feed-through from lower oil prices to these economies, which are all net oil importers.

Overall, our growth projections are broadly similar to the latest average of independent forecasters, as shown in Table 2.2. They are somewhat lower than the forecasts made by the OBR last November, but we would expect these to be edged down in the OBR's Budget forecasts on 16th March.

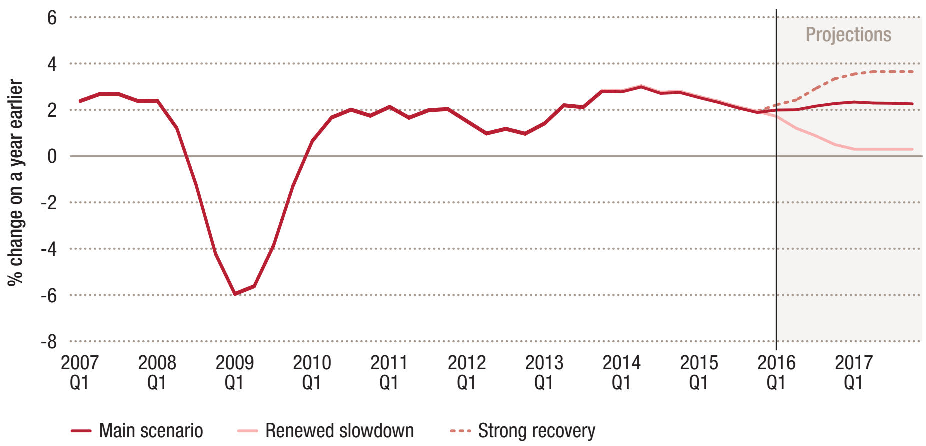
Alternative growth scenarios

In addition to our main scenario as outlined in Table 2.1, we have also considered two alternative UK growth scenarios, as shown in Figure 2.7.

- Our **'strong recovery' scenario** projects growth picking up again to around 3.5% in 2017. This is a relatively optimistic scenario which assumes that recent financial market weakness is quickly reversed, supported by a boost to US and euro area growth from lower oil prices, all of which will help to bolster consumer and business confidence in the UK.
- On the other hand, our **'renewed slowdown scenario'** sees UK GDP growth fall to close to zero in 2017 as the global outlook worsens and there are disruptive effects from a possible vote to Leave in the EU referendum in June, which would probably be followed by a prolonged period of uncertainty while negotiations took place as to the nature of future trading relationships with the rest of the EU after UK exit. Under Article 50, these negotiations could take up to two years, although in practice it could take even longer to put all aspects of a new UK/EU relationship in place on trade and other issues.

We do not believe that these alternative scenarios are the most likely outcome, but they are certainly possible and, at present, risks do appear to be weighted to the downside given recent global volatility and the uncertainties posed by the EU referendum. Businesses would therefore be well advised to make appropriate contingency plans for such less favourable outcomes, but without losing sight of the more positive possibilities for the UK economy should these downside risks not materialise.

Figure 2.7 – Alternative UK GDP growth scenarios



Source: ONS, PwC scenarios

Growth likely to remain stronger in services than manufacturing

The sector dashboard in Table 2.3 shows the actual growth rates for 2015 along with our projected growth rates for 2016 and 2017 for five of the largest sectors within the UK economy.

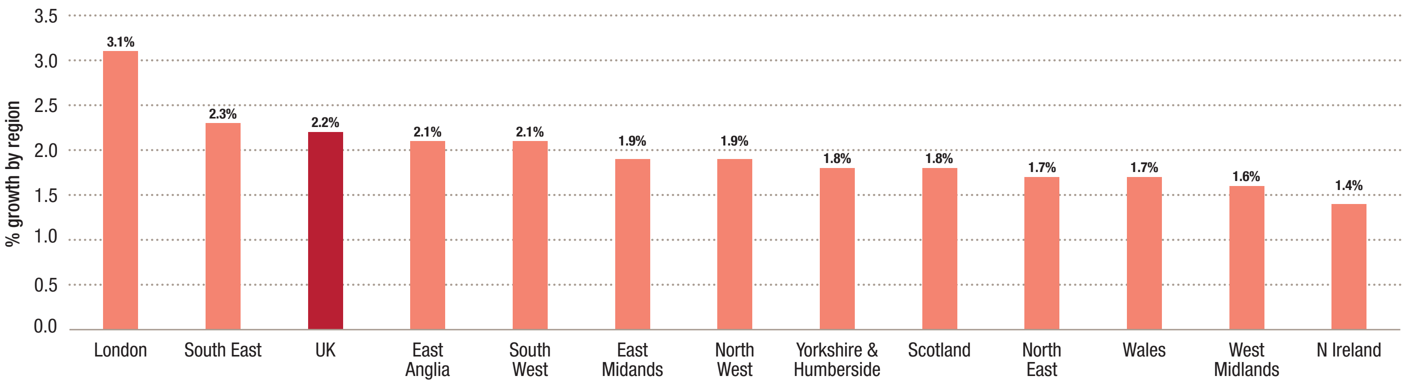
The table also includes a summary of the key issues affecting each sector. The outlook is clearly stronger for private non-financial services than other sectors, as we also discuss in much more detail for job prospects in Section 4 of this report.

Table 2.3: UK sector dashboard

		Growth		
Sector and GVA share	**2015**	**2016**	**2017**	**Key issues/trends**
Manufacturing (10%)	-0.2%	0.2%	1.7%	Manufacturing PMI fell in February and official data showed declining output in late 2015. Sluggish Eurozone economy has limited growth of UK manufacturing exports.
Construction (6%)	3.3%	0.2%	2.4%	The construction sector fell back in the second half of last year according to official data, reversing earlier strong output growth. Construction PMI suggests a more optimistic picture, but does indicate a fall in the pace of growth in a fall in the pace of growth in January and February 2016.
Distribution, hotels & restaurants (14%)	4.8%	4.0%	3.0%	ONS figures show that retail sales volume growth picked up sharply in January after dipping in December, though prices continue to fall on the high street and online due to fierce competition. Positive real earnings growth and continued increases in employment have lifted consumer purchasing power given recent very low rate of inflation.
Business services and finance (31%)	2.5%	3.1%	3.4%	Business services and finance sector continues to show relatively strong growth despite some volatility quarter to quarter. Services PMI fell back in February, but remains above 50 so is still signalling gradual growth. Financial sector faces regulatory challenges but business services have been stronger in recent years.
Government and other services (23%)	0.3%	0.8%	0.8%	Civil service and local authority spending is expected to be cut back in real terms over the next few years, but growth should remain positive for the NHS and schools.
Total GDP	**2.2%**	**2.2%**	**2.3%**	

Sources: ONS for 2015, PwC for 2016 and 2017 main scenario projections and key issues.
These are five of the largest sectors but they do not cover the whole economy - their GVA shares only sum to around 84% rather than 100%.

Figure 2.8 – PwC main scenario for output growth by region in 2016



Source: PwC analysis

Regional prospects: London continues to lead the way

London is expected to continue to lead the regional growth rankings in 2016, expanding by around 3% as shown in Figure 2.8. Most other regions are expected to expand at rates closer to the UK average of around 2%, but Northern Ireland is expected to lag behind somewhat with growth of around 1.4%.

It is important to note, however, that regional output data are published on a much less timely basis than national data. As a result, the margins of error around these regional projections are even larger than for the national growth projections and so they can only be taken as illustrative of broad directional trends.

There is also a strong case to look at a broader range of indicators of regional economic performance and we have developed a new PwC Regional Economic Dashboard to do this as presented in Box 2.1 at the end of this section. While London still scores relatively well on most of the indicators we consider, all regions are shown to have both areas of strength to build on as well as areas where more development is needed.

2.3 Outlook for inflation and real earnings growth

Consumer price inflation (CPI) picked up slightly to 0.3% in the year to January, which is its highest rate for a year but still very low by UK historical standards. The major cause of this persistently subdued inflation is the low level of global prices for oil and other commodities, but unit labour costs also remain relatively well behaved for the moment despite the tightening of the labour market.

Alternative inflation scenarios

In our main scenario we are projecting an average consumer price inflation rate of 0.5% in 2016, which we have revised down since our last Economic Outlook report in the face of further weakness in global commodity prices in early 2016. We do, however, then see a gradual rise back to close to the 2% target rate by the end of 2017 (see Figure 2.9) as these commodity price effects are assumed to fall out of the 12 month inflation rate calculation and the effect of the recent fall in the pound comes through[4]. This is broadly in line with the latest independent and Bank of England forecasts for inflation, but is subject to significant uncertainties as always.

To capture these we have considered two alternative scenarios for UK inflation:

- In our **'high inflation' scenario** we project inflation to average just over 1% in 2016 as a result of stronger UK and global demand growth and an associated pick-up in oil and other commodity prices. In this case, the UK inflation rate could rise to an average of over 3% by the second half of 2017, potentially prompting sharper than expected interest rate rises.

- In our **'low inflation' scenario**, by contrast, the UK and global economies would weaken, as would global commodity prices. In this case UK inflation could fall back into negative territory in late 2016 and 2017 and interest rates would remain near the zero bound.

As with our GDP growth scenarios, these alternative variants are not as likely as our main scenario, but given recent volatility and uncertainty, businesses should plan for such contingencies.

4 Future movements in sterling may well be affected by the EU referendum outcome, but we do not try to make any prediction of that here. In our main scenario we adopt the conventional assumption of a stable trade-weighted exchange rate for sterling.

Consumer price inflation exceeded earnings growth for six consecutive years following the onset of the 2008-9 recession, which was in marked contrast to pre-crisis norms. Positive real earnings growth resumed in 2015 as consumer price inflation fell to around zero, but nominal earnings growth in cash terms was still only around 2% at the end of 2015, which remains weak by historical standards. We do expect a gradual increase in this earnings growth rate in 2016-17 as the labour market tightens further and the National Living Wage comes into effect in April, but it will be a slow process. However, real earnings growth should remain positive over this period even if not as strong in the medium to long term as in the pre-crisis period, assuming jobs growth remains strong as we expect to be the case.

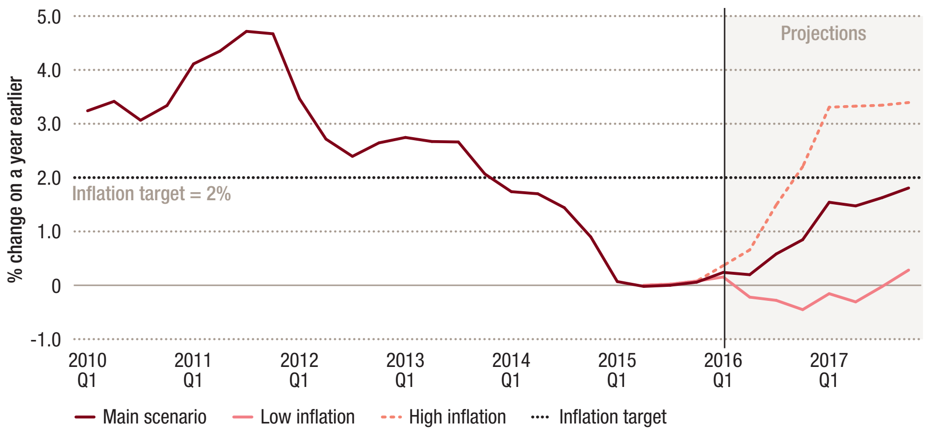
2.4 Monetary and fiscal policy options

Interest rates likely to remain on hold for some time

The Monetary Policy Committee (MPC) voted unanimously to hold interest rates at 0.5% in its latest meeting and we would expect this to continue to be the case for some time to come given current uncertainties relating to the global economy (and the EU referendum in June).

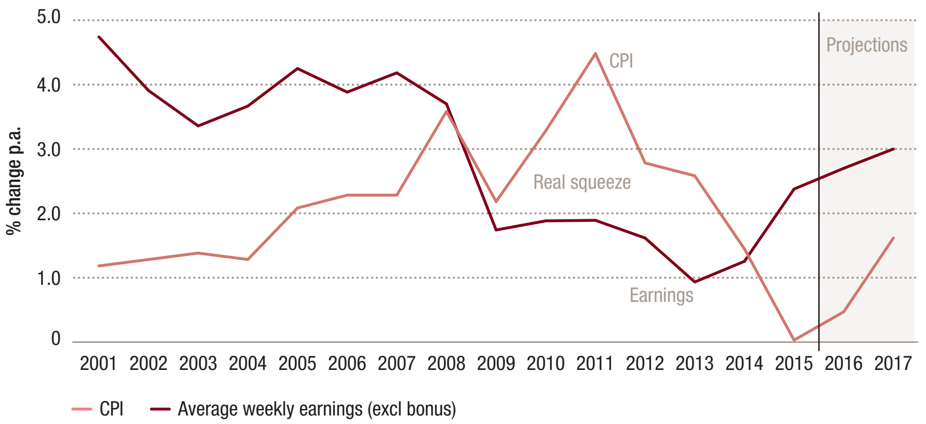
While the exact timing of the first rate rise remains highly uncertain, it now seems more likely that this could be delayed until 2017, with very gradual rises thereafter only taking official short-term rates to around 2% by 2020. This would offer ongoing support for domestic borrowing and spending, but such persistently low rates could also lead to the build-up of asset price bubbles as well as mitigating against an increase in UK savings rates, which would be desirable in the longer term.

Figure 2.9 – Alternative UK inflation (CPI) scenarios



Source: ONS, PwC scenarios

Figure 2.10 – CPI inflation vs average earnings growth



Source: ONS, PwC analysis

Chancellor likely to deliver another tough Budget

The UK budget deficit stood at around £67 billion in the first ten months of the 2015/16 fiscal year. This was around £10 billion lower than in the same months in 2014/15, but still appears to run a risk of overshooting slightly the OBR's November 2015 forecast of a £73.5 billion deficit in 2015/16 as a whole, given that there was a combined £15 billion net deficit in February and March last year.

More significant, however, is the medium term outlook for public borrowing. As Table 2.4 shows, our main scenario projection is that this should fall over time but somewhat less rapidly than the OBR projected in November. This is partly as we expect slightly lower nominal GDP growth and partly as we are slightly less optimistic than the OBR about the ratio of tax revenues to GDP going forward.

These differences are not great relative to the margins of error around any such medium term public finance projections, but they do suggest that the Chancellor may only broadly meet his balanced budget objective by the end of the Parliament, rather than building up a £10 billion surplus as the last OBR forecasts suggested.

Given this slightly less favourable fiscal outlook, we think the Chancellor will need to reaffirm his tough fiscal stance in the Budget on 16th March. If anything, he may err on the side of some net fiscal tightening, although we would not expect him to diverge too far from the tax and spending plans set out last year.

Table 2.4 – Comparison of PwC and OBR public borrowing projections

Public sector net borrowing (£ billion)*	2015/16	2016/17	2017/18	2018/19	2019/20
OBR forecast (November 2015)	74	50	25	5	-10
PwC main scenario (March 2016)	76	59	37	18	1

Source: OBR Economic and Fiscal Outlook (November 2015), PwC main scenario

*Excluding borrowing of public sector banks but including borrowing of housing associations

2.5 Summary and conclusions

UK economic growth slowed a little in 2015, but remains close to its long-term trend of just over 2% per annum and we expect this to continue in 2016-17. This would still leave the UK, along with the US, as one of the strongest growing economies in the G7.

Consumer spending continues to provide the primary driver of UK growth, supported by a recent pick-up in real earnings growth as inflation has fallen to close to zero, as well as a continued strong pace of jobs growth. Real consumer spending growth may moderate somewhat in 2017 and beyond, however, as inflation returns to more normal levels and households become reluctant to reduce their savings rates further.

Business investment should also make a positive contribution to growth in 2016-17, though this is more vulnerable to adverse global shocks to confidence, which remain the main downside risks to the UK economic outlook together with uncertainties surrounding the EU referendum vote in June.

The public sector is likely to be a drag on growth for the next 3-4 years as the Chancellor pursues his objective of eliminating the budget deficit by 2019/20. This is likely to require another tough Budget on 16th March. However, the strength of the private services sector should keep the UK domestic recovery on track in the short term unless we suffer very severe external shocks.

We expect earnings growth to pick up gradually as the labour market tightens, so we would expect the Monetary Policy Committee to start raising interest rates at some point, but this may be delayed until 2017 based on recent MPC statements. This should offer further support for consumer borrowing and spending in the short term, but could add to the risk of asset price bubbles and other financial market distortions in the longer term if rates remain lower for longer.

Box 2.1

PwC Regional Economic Dashboard – March 2016

	North East	North West	Yorkshire & Humberside	East Midlands	West Midlands	East
Indicators of performance outcomes						
GVA per head 2014	11th	6th	9th	7th	8th	4th
GVA growth 2014	Joint 7th	9th	Joint 7th	Joint 4th	10th	2nd
Employment growth 2 years to Sept.-Nov. 2015	3rd	1st	11th	Joint 7th	10th	Joint 5th
Indicators of drivers of performance						
Number of businesses, growth rate 2014	Joint 2nd	Joint 4th	Joint 4th	Joint 2nd	9th	7th
Total R&D as % of GVA	10th	8th	11th	3rd	5th	1st
% of labour force with no qualifications 2013*	9th	10th	7th	Joint 5th	11th	4th
Public spending per head 2014-15*	8th	7th	5th	3rd	6th	2nd

	London	Rest of South East	South West	Wales	Scotland	Northern Ireland
Indicators of performance outcomes						
GVA per head 2014	1st	2nd	5th	12th	3rd	10th
GVA growth 2014	1st	6th	Joint 4th	12th	3rd	11th
Employment growth 2 years to Sept.-Nov. 2015	4th	Joint 7th	2nd	12th	9th	5th
Indicators of drivers of performance						
Number of businesses, growth rate 2014	1st	Joint 4th	11th	10th	8th	12th
Total R&D as % of GVA	12th	2nd	4th	9th	7th	6th
% of labour force with no qualifications 2013*	3rd	1st	2nd	8th	Joint 5th	12th
Public spending per head 2014-15*	9th	1st	4th	10th	11th	12th

Note*: Lowest level ranked top, i.e. a low % without qualification and a low level of public spending per capita were judged beneficial to growth potential.

Definitions and sources:

GVA per head 2014:
Gross Value Added per head; ONS 9 December 2015, "Regional gross value added (income approach) 1997 to 2014".

GVA growth 2014:
Growth in the nominal level of gross value added in 2014 compared to 2013; ONS 9 December 2015, "Regional gross value added (income approach) 1997 to 2014".

Employment growth 2 years to Sept.-November 2015:
Total employment as measured in the Labour Force Survey; ONS 20 January 2016, "Regional labour markets".

Number of businesses growth rate 2014:
% birth rate of businesses minus the % death rate; ONS 24 November 2015, "Business demography 2014".

Total R&D as % of regional GVA 2013:
Gross expenditure on R&D in 2013; ONS 20 March 2015, "UK gross domestic expenditure on R&D, 2013".

% of labour force no qualifications 2013:
% share of 16-64 year olds with no qualifications in 2013; ONS July 2014, "Regional economic indicators".

Public spending per head 2014-15:
Public expenditure (total identifiable expenditure on services) per head 2014-15; HM Treasury 16 November 2015, "Country and regional analysis".

Methodology: what is included in the indices?

Data for the 12 UK NUTS1[1] regions are presented in this dashboard. Three indicators were chosen to illustrate performance: the level of output (GVA) per head, rate of economic growth and rate of employment growth.

The dashboard also includes four indicators relating to some of the likely drivers or explanations of regional performance:

- the growth rate in the number of businesses;
- total R&D as a percentage of GVA;
- percentage of the labour force with no qualifications; and
- public spending per head.

For the final two indicators higher values - i.e. a greater percentage with no skills and a higher level of public spending per head - are assumed to have a negative influence on performance.[2]

Key results

The ranking for each of the 12 regions in terms of various indicators is summarised by a traffic light system; if the region is ranked in the first, second or third position it is coloured in green but if it is ranked tenth, eleventh or twelfth it is coloured red. In between rankings are coloured in amber.

Whilst the rankings provide some indications of the so-called "North-South" divide they also illustrate that within most of the regions there is a variety of strengths and weaknesses. For example, Northern Ireland, the North East and Wales are ranked tenth, eleventh and twelfth respectively in terms of GVA per head but Scotland was ranked third. The North East was ranked joint second in terms of the growth rate for the number of businesses and the North West was first for employment growth. London was ranked first for three of the indicators - level of GVA per head, economic growth and growth in the number of businesses - and also had the third best position with respect to the level of skills. At the same time, the particular features of the London economy were probably reflected in some of the other rankings. London was ranked twelfth in terms of rate of spending on R&D; a major source of funding for R&D is manufacturing and the manufacturing sector is very small in proportional terms in London. London also had one of the highest levels of public spending per head.

1 The Nomenclature of Territorial Units for Statistics system used by the European Eurostat statistical agency.
2 Higher levels of public spending are assumed to have a negative impact on growth either because austerity is likely to have a greater proportional effect in higher spending regions or because of the possibility of crowding out.

3 – The UK economic recovery: Better balanced than you might think [1]

Key points

- UK economic growth since the financial crisis has been disappointing relative to past recoveries but not in relation to other G7 economies.

- The main reason for relatively weak growth has been sluggish consumer spending, particularly in the early phases of the recovery when consumers were hit by a "perfect storm" of rising VAT, high food and energy prices, and tough lending restrictions from banks. However, recent consumer spending growth has been stronger.

- Global headwinds do not seem to be responsible for subdued growth. The export contribution to UK growth has been broadly in line with historical trends and previous recoveries of a similar duration.

- Public spending "austerity" is not an obvious culprit for slower growth either. The contribution of government spending on goods and services to UK growth is small but broadly similar to the 1970s, 1980s and 1990s recoveries.

- Looking ahead, the key risk is that this relatively well balanced recovery does not last, particularly against the background of extremely low interest rates.

Introduction

The UK economic recovery – which started in the middle of 2009 – is now into its seventh year. In terms of GDP growth, it has been a relatively weak recovery, though this is not unique to the UK. In the past six and a half years, UK economic growth has averaged around 2%, significantly below the average of 3.4% for similar phases of previous post-war recoveries and also below the average trend rate of growth since 1970 (2.3%). Despite this disappointing growth, UK GDP has risen at the third fastest rate of all the G7 economies, behind Canada and the US, and our economy has rebounded more strongly than any other major European economy (Figure 3.1). The UK has also enjoyed a strong employment recovery, which has taken the employment rate to a new record high and brought the unemployment rate down to its lowest level for about a decade.

Alongside worries about the disappointing pace of recovery, there have also been concerns about its balance. Growth has been led by the services sector and manufacturing industry has lagged behind the pace of recovery in the rest of the economy – with output rising at around 1% per annum since 2009. As we discuss in Section 4 of this report, there has been a long-term decline in UK manufacturing employment, which is set to continue in the years ahead. We have not seen the "march of the makers" in the way that the Chancellor George Osborne suggested back in 2011.

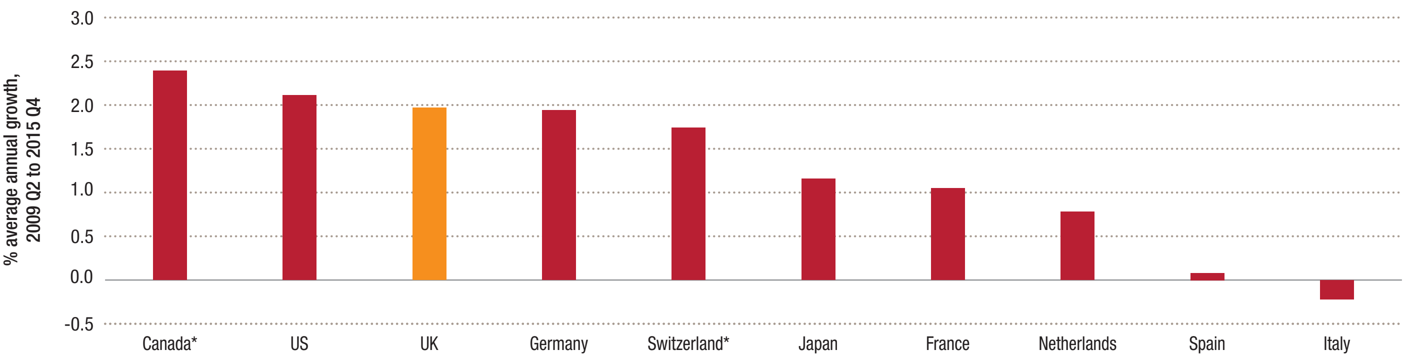
At the same time, economists have registered other concerns about the balance of the recovery. In its New Year review of economic forecasts the Financial Times found a widespread view that the UK recovery was unbalanced in some way. About half of the economists surveyed had concerns that growth was over-dependent on consumer spending or that the country's large balance of payments deficit was a significant problem.

But how justified are these fears? Consumer spending has not been particularly strong over this recovery. Household expenditure has risen on average by 1.7% a year, slower than overall GDP growth and considerably slower than the long-term rate of consumer spending growth of 2.7% per annum since 1970. Even though consumer spending has picked up in the past three years, its average growth rate since 2013 has still been below the long-term historical trend.

To understand better the drivers of this recovery and the question of the balance of growth, this article sets out a new framework for analysing the contribution of different sources of demand. The basis for this approach is set out in Section 3.1 below. Section 3.2 then uses this framework to look at the recent drivers of growth, comparing the balance between different elements to previous recoveries and long-term historical trends. Section 3.3 discusses the implications of this analysis for the issue of the balance of growth and for the sustainability and durability of the economic recovery. Section 3.4 summarises conclusions from the analysis.

1 This article was written by Andrew Sentance, Senior Economic Adviser at PwC.

Figure 3.1 – Recovery in G7 and major European economies



Source: OECD Quarterly National Accounts

*Growth to 2015 Q3

3.1 - Analysing the demand drivers of economic growth

The conventional analysis of GDP growth starts from a decomposition of GDP into domestic demand and net trade – exports less imports. This decomposition can then be used to account for the contribution of the different components of domestic spending – consumption, investment and government spending – with net trade making either a positive or negative contribution, depending on whether the growth of exports exceeds imports (positive) or import growth exceeds exports, which creates a drag on GDP growth.

As a piece of accounting this is mathematically correct, but there are a number of ways it does not capture very well the key features of a modern economy like the UK and the way it is affected by international trade. First, the contribution of net trade to GDP growth – which normally appears relatively small in this conventional GDP accounting - does not reflect the very important influence that trade has on economic growth, both in the short-term and the long-term.

In the short-term, big swings in demand in the UK economy can have very significant implications for growth, as we saw in the global financial crisis. Yet this does not show up clearly in the conventional accounting because imports often move in the same direction as exports in a recession or a boom. As a result the net trade contribution does not capture the full impact of swings in trade. Indeed, if imports and exports move broadly in line with each other, then the net trade contribution to growth will always be zero, even though the underlying level of economic activity could change. And if imports fall more sharply than exports in a recession (which is what happened in the UK in the 2008/9 recession), there can appear to be a positive net trade contribution, even though the economy has been hit by a large negative international shock.

In the long-term, globalisation and the growth of international trade are very powerful drivers of economic growth. But because exports and imports tend to grow together as world trade expands, this is not captured by the movement in net trade, which only reflects the difference between export and import growth. So over longer periods, conventional GDP accounting does not reflect the very powerful contribution of world trade to economic growth.

A second weakness of this net trade accounting approach is that it effectively counts the full weight of import growth against one component of demand – exports – whereas imports are generated by all the components of demand. Consumer spending and investment have a relatively high contribution to import growth, but this is not apparent in the accounting framework based on a net trade contribution to GDP. To understand the drivers of growth properly, we need a framework which reflects the way in which both domestic demand and exports affect import growth.

A third weakness of using net trade in the accounting framework for GDP is that it does not capture how businesses operate within the real economy. Businesses sell their output to customers at home and abroad. In terms of its impact on demand, the value of a sale to a UK customer should be seen as equivalent to the value of a sale of the same magnitude to an overseas customer. So we should be looking for a framework which treats UK and overseas customers in a broadly equivalent way in terms of their contribution to demand. On the import side there are other ways in which the net trade approach does not reflect reality. For many businesses, imports are an input into their processes, either in the form of raw materials and components or – in the case of retailers and distributors – as finished goods. The alternative to importing would be to source goods or services in the UK, so we should see imports and UK GDP as competing ways of meeting a given amount of spending on goods and services, which is driven by demand conditions.

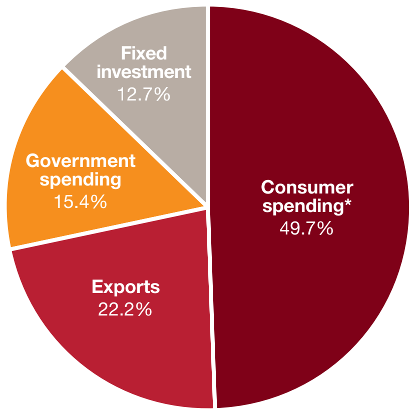
A very detailed input-output analysis of the transactions in the economy would capture these characteristics of the real economy, but it would be very complex. However, there is an alternative framework available based on the measure of Total Final Expenditure (TFE), which is the total value-added of goods and services either sold or produced in the UK.

Total Final Expenditure is made up of four main components which comprise the demand for the goods and services which the economy produces. The first is consumer spending – which is the largest component in the UK and other major economies. The second is capital investment, which is mainly undertaken by businesses, including the construction of houses and other buildings. The government also contributes to investment, for example through building transport infrastructure. The third source of demand is from overseas – exports of both goods and services. And the fourth element is the spending undertaken by the government in providing goods and services, like education and health. This is not the whole total of government spending, because the government also transfers money to households in the form of benefit payments and pensions. But these "transfer payments" only add to growth when the money is spent by consumers. So their contribution to demand is measured indirectly through consumer spending, not directly.

These four elements are the main components of final expenditure on goods and services, which drive GDP growth (when both are measured in real terms) and Figure 3.2 shows their relative contributions to TFE over the past decade. In the short-term, fluctuations in the level of stocks of materials, components and unsold goods can also play a part in influencing the level of economic activity. But, over longer periods, these fluctuations in the level of stocks do not have a significant influence on the growth of the economy. Stockbuilding is sometimes treated as a component of capital spending – i.e. investment in working capital – though more commonly it is discussed as a separate element of demand (which is the treatment used in this article).

Figure 3.2 – Composition of UK Total Final Expenditure

% of Total Final Expenditure in real terms, 2005-15



Source: ONS

Note: *Consumer spending includes non-profit sector.

The demand generated by higher spending, however, does not just boost the demand for goods and services produced in the UK. It also adds to imports from overseas – both when imported goods are part of the supply chain and when products bought by UK firms and households have been made overseas. So when Gross Domestic Product (GDP) is calculated, the value of imports has to be subtracted from total final expenditure. The key equations for understanding the growth of the economy from the demand side are therefore:

1) TFE = C + I +X + G + Stockbuilding

(TFE = Total final expenditure,
C = Consumer spending,
I = Capital investment,
X = Exports, and
G= Government spending on goods and services) and

2) GDP = TFE – Imports

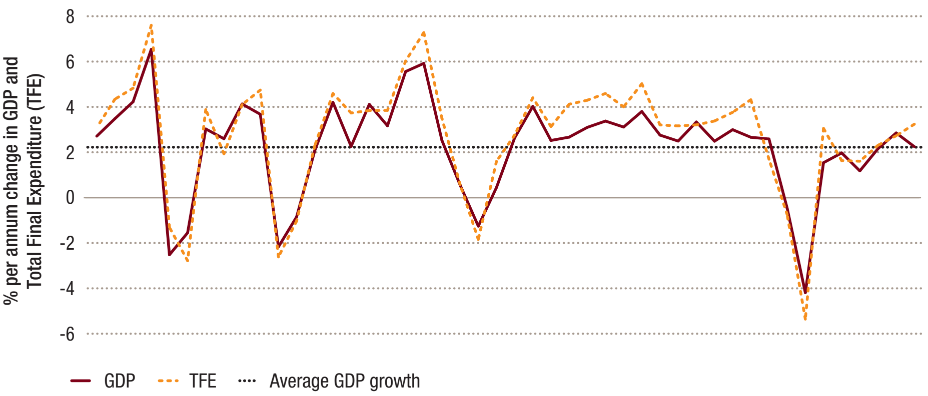
If final expenditure and imports grow at the same rate, then GDP growth will be in line with TFE growth. But if imports grow faster than spending, then GDP growth will be below the rate of growth of TFE – which has normally been the case for the UK economy. Figure 3.3 shows how GDP and TFE growth have moved closely together in the UK economy since 1970.

3.2 - The drivers of UK recoveries – past and present

This accounting framework provides an alternative and arguably more realistic way of decomposing GDP growth. Instead of using net trade, the contribution of exports and imports can be assessed separately. The way in which they feed into the growth accounting calculation is different, however. Exports add directly to demand, but it is only if imports grow faster than total spending (TFE) that they detract from growth. If imports grow more slowly than TFE, then their contribution to economic growth will be positive because that allows GDP to rise faster than total demand measured by TFE.

To set the context for analysing the current recovery, it helps first to look at the historical pattern of growth and the contribution of the different drivers identified by our framework. Table 3.1 shows two sets of benchmarks that we can use for our analysis. The first is the long-term historical trend, which is measured from 1970. The second is the experience of previous UK recoveries – measured, where possible, over the first six-and-a-half years of growth – which is the current length of the recovery we have experienced so far since mid-2009.[2]

Figure 3.3 – UK economic growth since 1970



Source: PwC analysis, ONS

Table 3.1: Contributions to UK growth: past trend and previous recoveries

	Contribution to TFE growth: % points per annum					TFE (% p.a.)	Imports (% p.a.)	GDP (% p.a.)
	Consumer	Investment	Exports	Gov't	Stocks			
1970-2015	**1.34**	**0.28**	**0.73**	**0.32**	**0.07**	**2.74**	**-0.46**	**2.28**
Recoveries								
1948-55	1.45	1.12	0.54	0.96	-0.33	3.74	-0.07	3.67
1975-79	1.18	0.87	0.90	0.26	0.60	3.81	-0.25	3.56
1981-87	2.02	1.01	0.74	0.18	0.33	4.26	-0.65	3.61
1991-97	1.72	0.27	1.22	0.13	0.28	3.62	-0.88	2.74
Average	**1.59**	**0.82**	**0.85**	**0.38**	**0.22**	**3.86**	**-0.47**	**3.39**

Source: PwC analysis of ONS data

Not surprisingly, consumer spending is still the largest single contributor to growth, accounting for nearly half of TFE growth since 1970 and just over 40% of demand growth in previous recoveries. Exports are the second most important contributor to the growth of demand both in the long-term and in recoveries. Investment makes a big contribution during recoveries, but a smaller contribution to trend growth as it is highly cyclical – falling sharply in downturns and then bouncing back as economic confidence recovers.

Government spending, however, is normally the smallest contributor of the major demand components in recoveries. This is an important point to bear in mind when considering the view that "austerity" in public spending plans is responsible for slow growth in this recovery. It would be surprising if the smallest major contributor of demand to economic growth in a recovery could exercise so much leverage on the path of the economy in this recovery.

2 See earlier UK Economic Outlook articles by Andrew Sentance on services productivity here: http://www.pwc.co.uk/assets/pdf/ukeo-jul2015.pdf and on the contribution of services to regional growth here: http://www.pwc.co.uk/services/economics-policy/insights/uk-economic-outlook/ukeo-nov2014-getting-the-balance-right-in-the-uk-regions.html

So how does the pattern of growth over this recovery compare with past historical experience? As we noted earlier, there have been two different phases to the current recovery. Until the end of 2012, GDP growth was relatively sluggish, averaging around 1.5% per annum. Since then, it has averaged around 2.5% - above the long-run trend and closer to the growth we have seen in previous recoveries. Table 3.2 shows both phases and the contributions to the average growth rate of 2% since 2009, which is then compared to the long-run historical trend and the average experience of previous recoveries.

The most striking feature of the analysis in Table 3.2 is that the weakness of consumer spending is the main difference between the pattern of demand in this recovery and previous experience. Despite all the concern about the weakness of the world economy – often referred to as global headwinds – the contribution of exports to growth since 2009 has been similar to previous recoveries and historical trends. It is worth recalling that UK recoveries in the 1980s and 1990s also took place against a turbulent global economic background. In the 1980s there was a major debt crisis in Latin America, and in the 1990s Europe went into recession in 1993 just as the UK recovery was getting underway. European growth was sluggish through the 1990s as Germany grappled with the challenges of unification, just as it has been disappointing over much of this recovery. Yet exports made a very strong contribution to growth in the 1990s recovery, as Table 3.1 shows.

Table 3.2: Contributions to UK growth: the current recovery in context

	Contribution to TFE growth: % points per annum					TFE (% p.a.)	Imports (% p.a.)	GDP (% p.a.)
	Consumer	Investment	Exports	Gov't	Stocks			
2009-12	0.47	0.39	0.72	0.12	0.33	2.04	-0.52	1.52
2013-15	1.24	0.60	0.73	0.27	0.06	2.91	-0.39	2.52
2009-15	**0.84**	**0.49**	**0.72**	**0.20**	**0.19**	**2.42**	**-0.44**	**1.98**
Differences of 09-15 from:								
1970-15	-0.50	0.21	0.00	-0.13	0.13	-0.30	0.00	-0.30
Previous recoveries	-0.75	-0.33	-0.13	-0.19	-0.02	-1.41	0.01	-1.42

Source: PwC analysis of ONS data

The weakness of consumer spending was particularly noticeable in the early years of the current UK recovery. Household spending was squeezed over this period by a combination of sluggish wage growth and high inflation. As inflation fell from a peak of over 5% in late 2011 to 2% by the end of 2013, the pressures on household expenditure eased. In the past three years, consumer spending has made a more normal contribution to the recovery. Another component of demand which has been making a stronger contribution since 2013 has been investment. However, this is less to do with business investment, which has grown fairly consistently since the financial crisis. Investment has been boosted since 2013 by a bounce-back in housing construction, helped by government initiatives like Help-to-Buy and Help-to-Build. The squeeze on government investment has also eased over the past few years.

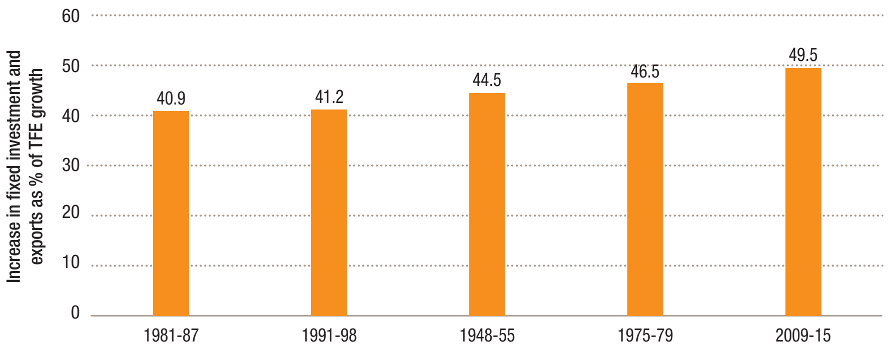
What has been the contribution of "austerity" to the pattern of weaker growth of this recovery compared to the past? The contribution of government spending – adding about 0.2 percentage points to TFE growth over the recovery – has been very similar to the growth contribution made by public spending in the 1970s, 1980s and 1990s recoveries. Probably the main impact of government fiscal plans were felt in 2010 and 2011 when the VAT rate was increased from a reduced rate of 15% to 20% in the space of two years. This added to the squeeze on households in the early phase of the recovery and contributed to the weakness of consumer spending. But there were other powerful factors adding to this consumer squeeze as well, including the impact of high energy and food prices from 2010 to 2012 and restricted access to finance for borrowers following the financial crisis.

3.3 - The balance of the recovery

This analysis suggests that some of the commonly expressed concerns about the balance of the UK economic recovery are exaggerated and misplaced. Consumer spending has made a lower contribution to economic growth across this recovery than in the equivalent phase of any previous post-war recovery. Meanwhile, investment and exports contributed jointly around half of the demand growth we have seen since 2009 – the first time this has happened at this stage of any post-war UK recovery. Figure 3.4 shows that the ratio of investment and export growth to increased consumption has been the most favourable of any of the previous recoveries of this duration that we have experienced since the Second World War.

However, that still leaves us with some puzzles about the balance of the recovery. First, why has manufacturing been struggling so much when exports have been doing relatively well? The answer here lies in the success of the UK's services exports, which have been discussed in a number of recent articles in previous editions of this report.[3] Indeed, in the second half of last year, the UK exported more services than manufactures for the first time in its history. Given our comparative advantage in services exports – not just in the financial sector, but in business and professional services and a wide range of other creative and knowledge-intensive activities – this pattern is likely to continue into the future.

Figure 3.4 – Recovery driven by investment and exports



Source: PwC analysis of ONS data

A second puzzle relates to the balance of payments. The UK has a total balance of payments deficit which has averaged nearly 4% of GDP in the past couple of quarters. However, the relatively high deficit does not reflect a significant deterioration on the trade account. Our trade deficit has been around 2% of GDP or so for the past few years and, if anything, it has narrowed slightly in recent quarters. Rather, UK firms and investors are receiving less income from their activities overseas than we are paying out to foreign firms and investors. This may be a temporary phase linked to slow growth in Europe and other weak spots in the world economy. Or it may be the start of a longer term pattern. But the key point is that the balance of payments figures do not reflect poor UK trade performance. As this article has argued, the contribution of exports and imports to our growth over this recovery has been broadly in line with past trends.

There are, however, risks for the future which we need to be aware of. The household savings ratio has fallen quite sharply in recent years and one of the drivers of this shift has been a recovery in mortgage borrowing, which has also been associated with higher house price inflation – particularly in London and the South-East. So a well-balanced recovery so far could become less balanced in the future, and this is one of the risks of a prolonged period of low interest rates. Persistent delays in taking the first step to raise interest rates in the UK could be aggravating the prospect of excessive borrowing and other financial risks.

3 Quarterly data is only available from 1955 so the first post-war recovery period is measured using 7 years of annual data (1948-55). The late 70s recovery came to an end in 1979, so is measured over 4¼ years rather than 6½ years (1975Q3 to 1979Q4). The periods used for analysis of the other recoveries shown in Tables 3.1 and 3.1 are 1981Q1-1987Q3; 1991Q3-1998Q1; and 2009Q2-2015Q4.

3.4 - Conclusion

Every phase of economic growth is different, so there is no such thing as a typical recovery. This recovery has been characterised by weak consumer spending growth, particularly before 2013, and this has exerted a drag on the overall rate of expansion of the UK economy. In other respects, however, the pattern of growth does not look abnormal. Despite concerns about global headwinds and disappointing world growth, the contribution of UK exports and imports to our recovery has been much in line with previous experience. The role of public spending on goods and services has also been much in line with our experience from the 1970s, 1980s and 1990s, when the UK government was also trying to control deficit spending. From a macroeconomic perspective this has not been an unusual period of austerity in government spending. The main dampening influence on growth from fiscal policy has come from the effect of the two VAT rises earlier in the recovery on consumer spending – which are now behind us.

Concerns that this has been an excessively consumer-driven recovery so far are misplaced. Investment and exports have contributed about half of total growth, above their historical contribution, whereas consumer spending has contributed just about a third. The UK's balance of payments deficit reflects shifts on the income side of the account rather than poor trade performance. So far, this recovery has been better balanced than many economists recognise. The challenge looking ahead is to keep it that way.

4 – Which industries will drive future jobs growth in the UK?

Key points

- Total employment in the UK could grow by around 3 million over the next decade, with the total number of jobs reaching almost 37 million by 2025.
- Education and health could add over 1 million jobs by 2025 and become the biggest of the services sectors.
- Business services could create around 1.5 million more jobs by 2025 and become the second biggest services sector, with distribution, hotels and restaurants in third place.
- The number of jobs in manufacturing could fall by a further 600,000 to around 2 million by 2025 as new automated technologies continue to boost productivity and overseas competition remains fierce.
- Around 150,000 jobs could be lost in public administration, defence and social security as austerity measures continue at least until 2020.

Introduction

The UK has been a powerful job creating machine in recent years, with gains in private services sectors far outweighing cuts in manufacturing and parts of the public sector (other than health and education). But can we expect these positive trends to continue over the next decade in the face of further austerity, automation and international competition? This section presents our projections for jobs growth by industry sector to 2025 after first analysing historical trends. Our focus here is on the UK as a whole.

The discussion is organised as follows:

Section 4.1	Long term changes in the industrial structure of UK employment
Section 4.2	Employment and productivity growth by industry sector
Section 4.3	Projected employment growth trends over the next decade
Section 4.4	Summary and conclusions

4.1 - Long term changes in the industrial structure of UK employment

We begin with a long term view of how the structure of UK employment has changed over the past 175 years using Population Census data. Figure 4.1 shows how this can be divided into three distinct time periods.

Back in 1841, manufacturing was the largest employer in Britain, closely followed by services. By that time, only 1 in 4 people were employed in the agriculture, forestry and fishing industry, which had been dominant before the Industrial Revolution began in the mid-18th century, and this fell to less than 1 in 10 by the start of the 20th century. Services had caught up with manufacturing by 1871, but employment in these two sectors remained broadly similar prior to World War I.

The second period, from 1911 to 1961, saw stronger growth in the services industry, reaching around half of total employment in England and Wales by 1931. Manufacturing's share fell during the inter-war years when the global trade environment was disrupted, but recovered slightly after 1945 as world trade growth picked up again. The percentage of employment in agriculture continued to fall and, by 1961, only 1 in 25 people were employed in this sector.

However, it was in the final period from 1961 until the present day during which the growth in services really took off, now accounting for over 80% of all jobs. Manufacturing, on the other hand, fell to just 9% of all jobs by 2011 as international competition increased, production moved overseas seeking lower costs and some services previously undertaken within manufacturing companies were outsourced (e.g. cleaning and catering)[1]. As we will discuss later, however, manufacturing output held up much better than employment as productivity growth remained relatively strong.

1 This latter point may overstate the decline in 'true' manufacturing jobs in the official statistics we use for this article, but unfortunately no data are readily available that adjust for this effect.

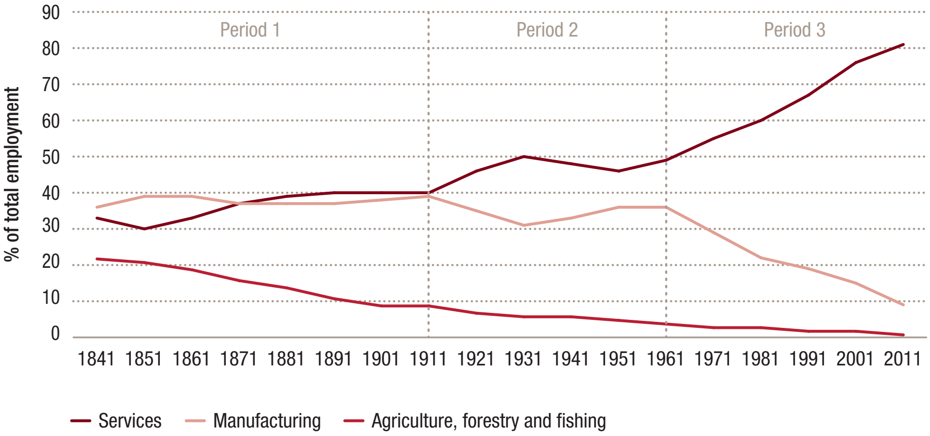
Detailed analysis of sectoral employment trends since 1978

Census data give an indication of the broad shift in UK employment since the mid-19th century, but more detailed sectoral breakdowns are only available since 1978 based on the official ONS workforce jobs survey[2]. Figure 4.2 shows this for selected dates, all for September for consistency, as follows:

- September 1978 – The first detailed sectoral data available from the ONS workforce jobs survey in its current format;
- September 1997 – A mid-cycle date that could be considered broadly comparable with 2015 so that the whole period from 1997-2015 covers trends over roughly a full economic cycle;
- September 2007 – Around the start of the global financial crisis;
- September 2010 – Around the low point for total UK employment after the crisis; and
- September 2015 – The latest available data from the workforce jobs survey.

Figure 4.2 shows the growing dominance of the UK services industry and the sharp decline in manufacturing in recent decades. Employment in energy and water also declined sharply in the 1980s and 1990s with the decline of the UK coal mining industry and the effect of the electricity, gas and water privatisations in encouraging efficiency-enhancing job cuts. Employment in construction has, by contrast, been remarkably stable at around 6-7% of the total for nearly 40 years, despite some cyclical ups and downs during this period.

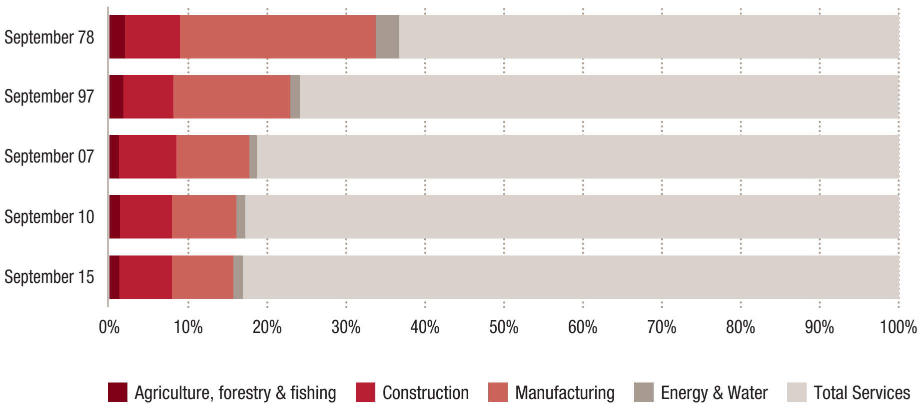
Figure 4.1 – UK Employment shares by industry since 1841



Source: ONS census data

Note: Data until 1911 covers Great Britain, and from 1921-2011 covers England and Wales, but this should not make a major difference to the broad trends shown.

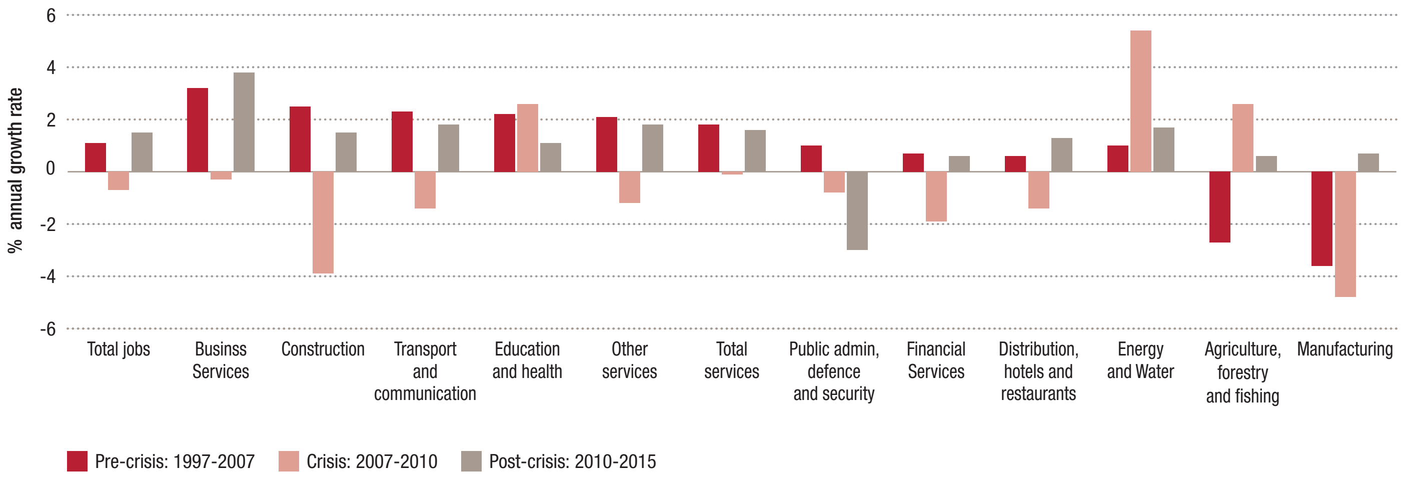
Figure 4.2 – Breakdown of UK jobs by industry sector since 1978



Source: PwC analysis of ONS data

2 Note that this measures the numbers of jobs (including self-employment), which will be higher than the number of people employed given that some may have two or more jobs. These estimates are mostly based on employer surveys, which are considered by the ONS to be more reliable in providing an industry classification than the Labour Force Survey (LFS), which is of individuals. However, LFS data is used for self-employment and other administrative sources are also used by the ONS to supplement employer surveys where appropriate. The latest such workforce jobs data published at the time of writing are for September 2015 given that they are only produced quarterly with some time lag.

Figure 4.3 – Annual job growth rates by sector since 1997

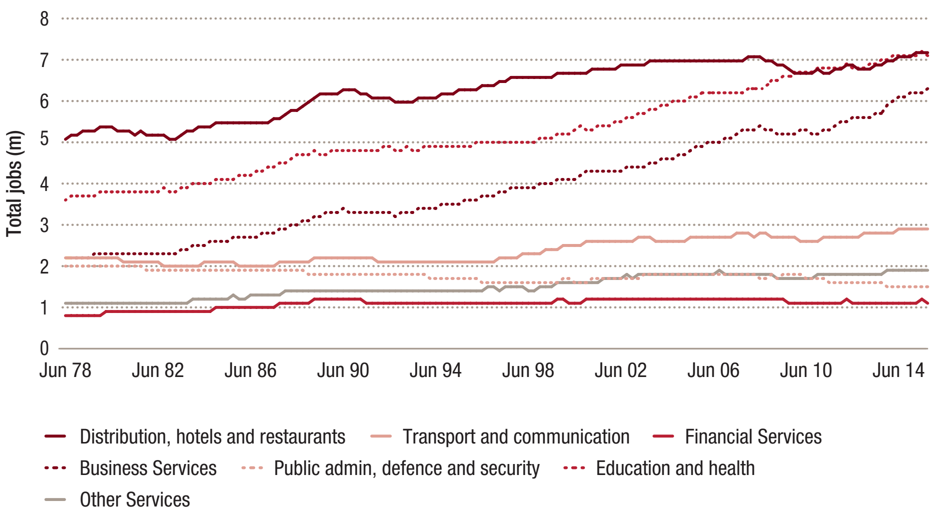


Source: PwC analysis of ONS data

Figure 4.3 shows a more detailed sectoral breakdown of the growth rates of employment within three sub-periods of what we estimate to be the latest full economic cycle: pre crisis (1997-2007), crisis (2007-2010) and post-crisis (2010-2015). Construction and manufacturing were hit the hardest by the financial crisis, with employment in these sectors falling by around 4% per annum in 2007-10. By contrast, education and health employment continued to grow through the recession and beyond, while the public administration, defence and social security sector saw jobs cut after 2010 as austerity started to bite.

To understand what is really driving UK employment growth, however, we need to look more closely at the growth in key services sectors, as shown in Figure 4.4.

Figure 4.4 – Jobs trends in services sectors



Source: PwC analysis of ONS data

Business services has experienced the strongest growth since 1978 and now employs over 6 million people as well as being a major contributor to UK exports and productivity growth[3]. Distribution still remains the biggest employer of services at around 7 million, but its growth rate has been much less strong and the education and health sector is only just behind now.

Despite London being a global centre for the industry, financial services account for relatively few (but, on average, high value) jobs and has seen broadly flat employment levels in recent years in contrast to the very strong growth in business services jobs.

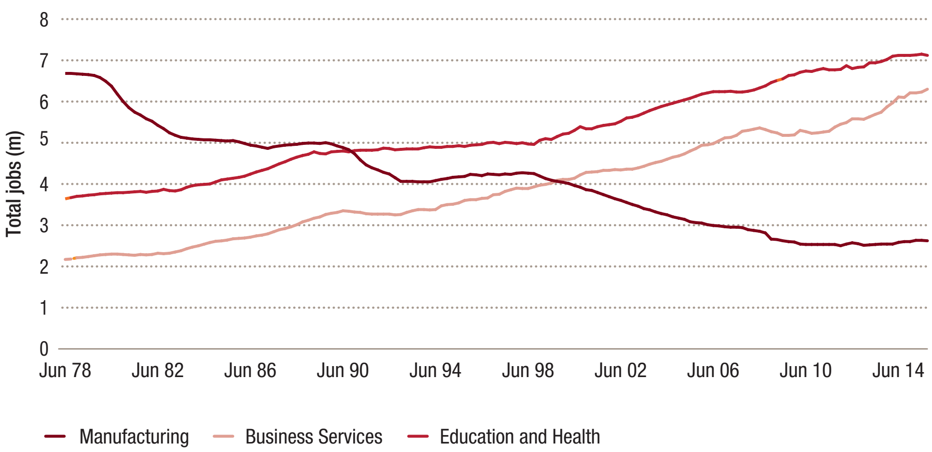
As the UK economy has transitioned towards services, so manufacturing has been overtaken first by health and education (in around 1990 as Figure 4.5 shows) and then by business services in around 2000. Manufacturing was hit hard by the recessions in the early 1980s and early 1990s, with the total number of jobs falling by 23% and 18% respectively. Between recessions, manufacturing employment appears to have been relatively stable until around 1997, but was then hit by increased competition from China and other emerging markets and a relatively strong pound until 2007. It was then impacted by the global financial crisis of 2008-9, though to a lesser degree than in earlier recessions.

The rise in business services employment has been particularly striking in recent decades, associated partly with outsourcing from other sectors and partly with strong growth in professional areas like law, accounting, consultancy and real estate services. We can also note that this has gone alongside a general rise in entrepreneurial activity in the UK. For example, the Department for Business, Innovation and Skills (BIS) estimates that the total number of businesses in the UK's private sector has grown from 3.5 million in 2000 to 4.9 million in 2013 – a rise of just over 40% during this period[4].

This almost perfectly matches the 40% growth in jobs in professional, scientific and technical activities over the same period, which may be related to some degree.

It is worth noting that there has also been a marked rise in self-employment[5] in the UK since the late 1970s, some of which may be a voluntary sign of increased entrepreneurship and some a less positive indication of people wanting but being unable to become employees in either the private or public sector jobs during and after major recessions, or indeed people who have been made redundant "forced" into self-employment. We discuss these trends further in Box 4.1 at the end of this article.

Figure 4.5 – Manufacturing vs education and health vs business services



Source: PwC analysis of ONS data

3 As highlighted, for example, in an article by Andrew Sentance, PwC's senior economic adviser, in our July 2015 UK Economic Outlook report: http://www.pwc.co.uk/assets/pdf/ukeo-jul2015.pdf
4 Source: Business population estimates for the UK and regions 2013, Department for Business Innovation and Skills, October 2013.
5 Note that the jobs figures in this article generally include both employees and the self-employed.

4.2 - Employment and productivity growth by industry sector

The relationship between productivity growth[6] and employment growth is also important in assessing overall sectoral performance. Figure 4.6 shows how industries compare on these two measures over the period since 1997 (which is roughly a full economic cycle as we noted earlier).

Our analysis shows a negative correlation coefficient between employment growth and productivity growth of around -0.5 (the dotted line in Figure 4.6). While correlation does not necessarily imply causation, there does appear to be some tendency for labour-intensive sectors that face increased demand but have relatively low productivity growth potential to generate a lot of jobs so as to meet this extra demand (e.g. education and health). The opposite may tend to be true for more capital-intensive sectors (e.g. manufacturing, energy and water). But there are also 'star' sectors that are outliers on the chart and perform relatively well on both measures, in particular:

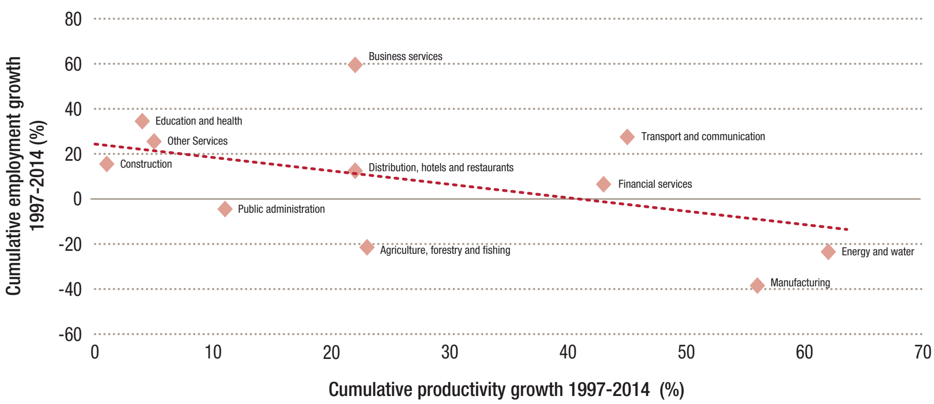
- **business services**, which tend to be labour-intensive and so have increased employment numbers greatly in response to a strong increases in demand, but have also been able to make some efficiency gains over time through use of new information technologies; and

- **transport and communication**, which is a more capital-intensive sector in general, but has also seen reasonably strong jobs growth since 1997.

These two sectors illustrate the possibility that higher productivity might itself, through lowering costs and prices, actually boost output and hence employment in the medium to long run.

There are also some sectors, however, where either productivity growth has been weak without being a huge job creator (e.g. construction), or where employment has been stagnant or falling without particularly strong productivity growth since 1997 (e.g. public administration and agriculture).

Figure 4.6 – UK sectoral jobs growth vs productivity growth (1997-2014)



Source: PwC analysis of ONS data

6 Measured here as output per job in volume terms.

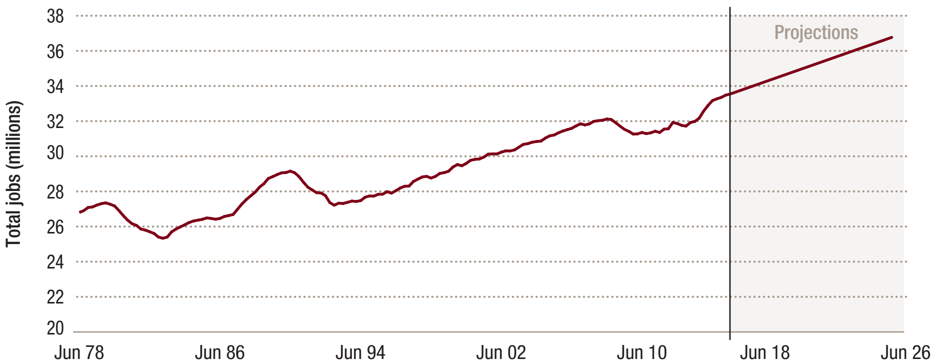
4.3 – Projected employment growth trends over the next decade

We now turn to future job prospects. We began by looking at the past trend in the total number of UK jobs as shown in Figure 4.7 and then project this forward to 2025. This implies average annual jobs growth of around 0.9% per annum, which is similar to that achieved over the approximate full economic cycle from 1997-2015 and also broadly in line with the latest OBR employment growth projections for 2015-20. If we assume overall GDP growth of around 2-2.5% per annum in line with OBR estimates, this would imply average productivity growth of around 1-1.5% per annum, somewhat lower than historical norms but more consistent with trends in the recovery period since mid-2009. This would also suggest continued positive, but relatively modest, real earnings growth of around 1-1.5% per annum over the next decade, as you would expect this to broadly match productivity growth.

Of course, actual jobs growth will almost certainly be less smooth than shown in Figure 4.7, so our projection should be interpreted as an indicator of the long term underlying trend, not a year-by-year forecast. We cannot predict the cyclical ups and downs of the labour market over the next decade but we assume, in the absence of any better information, that these cyclical variations will broadly average out over this ten year period. This is clearly not guaranteed and so represents one source of risk to our projections (this and other uncertainties are discussed further later in this article).

Overall, our projections imply cumulative jobs growth of around 3 million by 2025, taking the total number of jobs in the UK to almost 37 million by that date (note that this will be more than total employment, since some people will have more than one job).

Figure 4.7 – Projected trend growth in total UK jobs to 2025



Source: PwC projections based on historical ONS data

Having set the overall jobs envelope, we assess how this might break down by industry sector as set out in Table 4.1.

Comparing the last two columns in Table 4.1 shows that in many sectors we consider it reasonable for historic trends to continue over the next decade. This includes a continued decline in manufacturing jobs as smart automation reduces the number of workers required while also boosting productivity as in the past. There may be some areas where 'cobotics' will involve increased demand for people with the skills to work in a complementary way with robots[7], but these are likely to involve a small number of relatively highly qualified staff, not a return to the mass manufacturing employment seen in the UK in earlier periods.

Public administration is also likely to see further job losses as austerity continues over the period to 2020. Even beyond this date, however, we expect the UK government to use digital technologies to enhance efficiency and reduce headcount while aiming to maintain service quality[8].

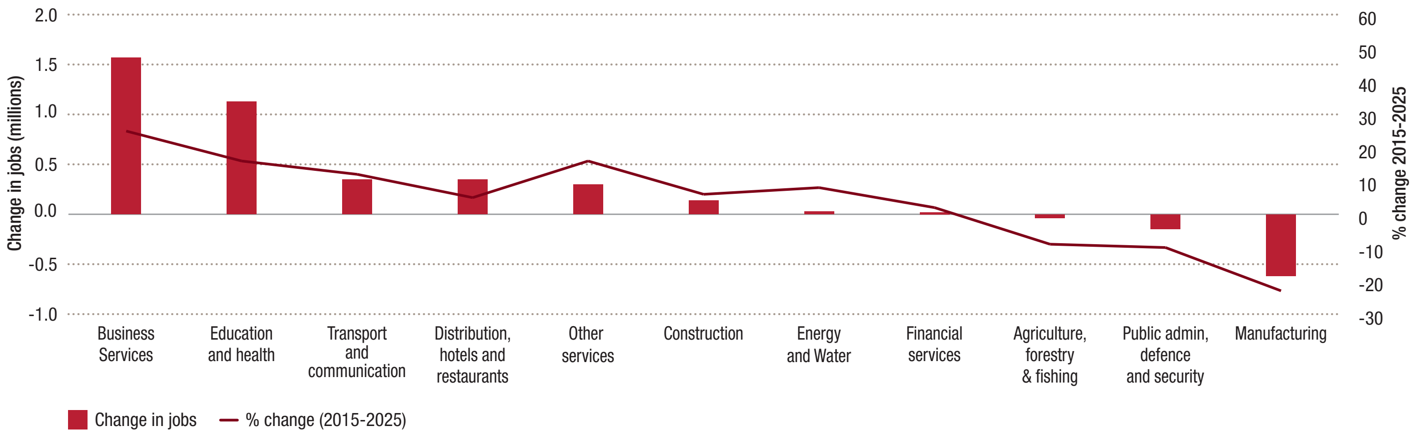
Table 4.1 – UK employment growth rates 1997-2015 and 2015-2025

	Number of jobs (millions)			Growth rates (per annum)	
Industry	**1997**	**2015**	**2025 (projected)**	**1997-2015**	**2015-2025 (projected)**
Agriculture, forestry & fishing	0.5	0.4	0.4	-0.9%	-0.9%
Construction	1.8	2.2	2.4	1.1%	0.6%
Manufacturing	4.3	2.6	2.0	-2.6%	-2.6%
Energy and water	0.3	0.4	0.4	0.8%	0.8%
Distribution, hotels and restaurants	6.6	7.2	7.5	0.5%	0.5%
Transport and communication	2.2	2.9	3.2	1.6%	1.2%
Financial services	1.1	1.1	1.2	0.2%	0.2%
Business services	3.9	6.3	7.9	2.8%	2.3%
Public administration, defence and security	1.6	1.5	1.3	-0.4%	-1.0%
Education and health	5.0	7.1	8.3	2.0%	1.5%
Other services	1.5	1.9	2.2	1.5%	1.5%
Total services	21.8	28.0	31.6	1.4%	1.2%
Total Jobs	**28.8**	**33.7**	**36.9**	**0.9%**	**0.9%**

Source: PwC projections and ONS historical data

7 As discussed further in our Strategy& Industry Perspectives piece on the future of manufacturing here: http://www.strategyand.pwc.com/perspectives/2016-manufacturing-trends
8 For more discussion of these and other issues around the future of government see: http://www.pwc.com/gx/en/industries/government-public-services/public-sector-research-centre/publications/government-19th-annual-ceo-survey.html

Figure 4.8 – Change in jobs over the next decade by UK industry sector (2015-2025)



Source: PwC projections based on historical ONS data

But we expect that these areas of declining headcount will be far outweighed by continued strong job creation in health and education and business services in particular (see Figure 4.8).

Although we believe the growth in business services will slow down slightly from its past trend as some of these markets mature, we are projecting close to 900,000 new jobs in professional, scientific and technical activities by 2025 (in contrast, administrative and support services jobs may be more at risk from further advances in automation[9]).

In contrast to business services, the financial services sector is unlikely to be a large job creator, though there could be plenty of change within the market due to regulatory pressures and challenges to incumbents from FinTech start-ups[10].

We project around 1.1 million new jobs in health and education by 2025, taking its total above that for distribution, hotels and catering, with around 60% of these new jobs arising in the health sector as an ageing population further increases demand in this area. The NHS is pushing towards more healthcare being provided in the community, where it is relatively cheaper, rather than the expensive acute sector, but this is more to save non-labour costs rather than reduce the number of doctors, nurses and other carers needed. We do expect the growth in this sector over the next decade to slow down somewhat, as the rate of jobs growth seen in 1997-2015 seems financially unsustainable in the long run, but this is still likely to be a major net job creator if health and long term care service standards are not to be seriously eroded over the next decade.

Overall, therefore, we are projecting close to 3.6 million extra jobs within services over the next decade, with this broad sector accounting for over 85% of total UK employment by 2025. By that date, there could also be fewer people working within manufacturing than construction for the first time in recorded history.

9 Offshoring may also continue to be a factor in some support services, though there could also be some 'reshoring' of customer service call centres as we argued in earlier research here: http://www.pwc.co.uk/services/economics-policy/insights/uk-economic-outlook/reshoring-a-new-direction-for-the-uk-economy-ukeo-march14.html
10 As discussed further here: http://www.strategyand.pwc.com/perspectives/2016-financial-services-trends

Risks to our projections

Whilst we believe our projections are plausible, they could be thrown off by various factors including:

- a deep and prolonged recession from which the economy was not able to recover fully by 2025 (though past experience is that jobs growth does eventually bounce back from such cyclical downturns, so our projections may still be a good guide to longer term underlying trends);
- little or no continuation of recent trends towards increased labour force participation by older people, which will be needed to keep the workforce growing strongly despite an ageing population; planned further rises in state pension ages will tend to support this trend continuing but it is not guaranteed it will proceed as fast as in the past five years in particular;
- severe limits being imposed on migration of workers to the UK, for example after a vote to leave the EU (although it is important to note that our projections are broadly consistent with ONS population projections which suggest a gradual moderation in net migration to the UK from the very high levels seen over the past few years); and
- a significant number of workers being displaced from some jobs by smart machines, although these should – as in the past – be compensated for to a large degree by job creation in other services areas, even if we cannot easily predict what these new jobs will be (there should certainly be some new digital job creation, as we have argued in our previous research).

4.4 – Summary and conclusions

The dominant story of the last century has been the rise of services to its current position as the dominant source of UK employment. Manufacturing now accounts for less than 10% of UK jobs and there is little prospect of this reversing, while health and education and business services have been the biggest growth areas since the late 1970s.

Looking ahead, our analysis suggests that over the next decade:

- Employment in the UK could grow by around 3 million by 2025, with the total number of jobs reaching almost 37 million.
- Education and health could add over 1 million jobs by 2025 and become the biggest of the services sectors.
- Business services could create around 1.5 million more jobs by 2025 and will become the second biggest services sector, with distribution, hotels and restaurants in third place.
- The number of jobs in manufacturing could fall by a further 600,000 to around 2 million by 2025 as new automated technologies continue to boost productivity and overseas competition remains fierce.
- Around 150,000 jobs could be lost in public administration, defence and social security as austerity measures continue at least until 2020.

11 The ONS projections suggest working age population growth of around 0.6-0.7% per annum as compared to our 0.9% per annum employment growth projections. We would see the difference as being made up by a continued trend towards higher employment rates, particularly for women and older workers.
12 PwC UK Economic Outlook, March 2015 here: http://www.pwc.co.uk/services/economics-policy/insights/uk-economic-outlook/ukeo-mar2015-new-job-creation.html

Box 4.1

The rise of self-employment

As Figure 4.9 shows there was a strong rise in self-employment in the UK in the 1980s and then again over the past decade (though the last year has seen more volatile trends).

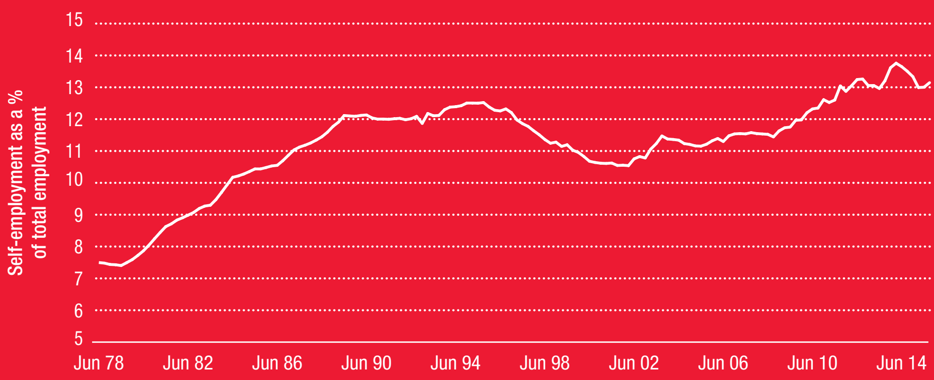
The industries with the highest and lowest self-employment rates are shown in Table 4.2.

Whilst it may be no surprise to see that agriculture, forestry and fishing has the highest rate of self-employment the absolute numbers involved are small. There have, however, been significant increases recently in the construction and other services sectors, perhaps partly as a result of people laid off during the last recession being unable to get corporate jobs after that, as well as by older workers preferring to be their own boss.

It is also notable that the biggest growth in self-employment over the past 10 years has been in education: from 2005 to 2015 there were nearly 200,000 more self-employed people in this sector, perhaps reflecting both cutbacks in some public sector services, particularly in further education, as well as people turning to tutoring as a supplement to other household incomes and/or a convenient source of part-time work for older, well educated people.

We believe that this growing trend for self-employment will continue over the next 10 years, perhaps pushing up the proportion of self-employed workers to close to 20% by 2025. The rise of the 'gig economy', as exemplified by digital age companies like Uber and Task Rabbit, may be at the forefront of this trend as discussed in previous PwC research[13].

Figure 4.9 – Self-employment as a percentage of total employment



Source: PwC analysis of ONS data

Table 4.2: Highest and lowest rates of self-employment (as % of total jobs in sector)

Highest self-employment rates	Lowest self-employment rates
Agriculture, forestry & fishing (48%)	Public administration, defence and social security (3%)
Construction (37%)	Water supply, waste & remediation activities (5%)
Other services (34%)	Accommodation and food services, and financial and insurance activities (7%)

Source: PwC analysis of ONS data

13 See our analysis of the sharing economy's growth potential at: http://www.pwc.co.uk/issues/megatrends/collisions/sharingeconomy.html

Appendix A
Outlook for the global economy

Table A.1 presents our latest main scenario projections for a selection of economies across the world.

Growth in leading developed economies remained modest in 2015 and this looks set to continue in 2016, with the US narrowly outpacing the UK as the fastest growing G7 economy. Overall Eurozone growth rate is picking up slowly led by Spain and Ireland rebounding from earlier crises, but remains modest in the big three economies of Germany, France and Italy.

Growth in emerging markets has lost momentum with a slowdown in China and continuing recessions in Brazil and Russia, though the growth outlook appears brighter at present in India (which is a gainer from lower oil prices). In light of these uncertainties, global GDP projections remain moderate for 2016 at around 3.2% using PPP weights – estimated global growth is lower at around 2.7% in 2016 using MER weights as this gives less weight to China and India in particular.

Global inflation has fallen in 2015 as rates hover around zero for most of the G7. Inflation is expected to edge back up through 2016 and beyond, however, as past commodity price decreases gradually fall out of 12-month inflation rate calculations.

These projections (including those for the UK) are updated monthly in our Global Economy Watch publication, which can be found at www.pwc.com/gew

Table A.1: Global economic prospects

	Share of world GDP	Real GDP growth (%)		Inflation (%)	
	2014 at MERs	2015e	2016p	2015e	2016p
US	22.5%	2.4	2.3	0.1	1.3
China	13.4%	6.9	6.5	1.5	1.8
Japan	6.0%	0.7	1.3	0.8	0.9
UK	3.8%	2.2	2.2	0.0	0.5
France	3.7%	1.1	1.3	0.1	0.4
Germany	5.0%	1.4	1.8	0.1	0.6
Greece	0.3%	-0.3	-1.0	-1.1	0.1
Ireland	0.3%	6.5	5.0	0.0	1.0
Italy	2.8%	0.6	1.0	0.1	0.2
Netherlands	1.1%	1.9	1.7	0.2	1.0
Portugal	0.3%	1.5	1.5	0.5	0.8
Spain	1.8%	3.2	2.8	-0.6	0.2
Poland	0.7%	3.5	3.5	-0.9	0.8
Russia	2.4%	-3.8	-1.1	15.5	7.9
Turkey	1.0%	3.4	3.3	7.7	8.5
Australia	1.9%	2.2	2.4	1.5	2.3
India	2.7%	7.1	7.7	-4.9	4.1
Indonesia	1.1%	5.2	4.8	6.8	6.1
South Korea	1.8%	2.6	3.1	0.8	1.5
Argentina	0.7%	2.0	1.7	17.0	25.0
Brazil	3.0%	-3.8	-3.6	9.0	9.0
Canada	2.3%	1.3	1.6	1.1	1.7
Mexico	1.7%	2.5	2.7	2.7	3.2
South Africa	0.5%	1.5	1.0	4.6	5.8
Nigeria	0.7%	3.2	3.7	9.0	10.0
Saudi Arabia	1.0%	3.2	1.3	2.2	2.7
World (PPP)		3.2	3.2		
World (Market Exchange Rates)	100%	2.6	2.7	1.9	2.3
Eurozone	17.4%	1.5	1.6	0.0	0.5

Source: Latest estimates for 2015 and PwC main scenario for 2016; IMF for GDP shares in 2014 at market exchange rates (MERs).

Appendix B

UK economic trends: 1979 – 2015

Annual averages	GDP growth	Household expenditure growth	Manufacturing output growth*	Inflation (CPI**)	3 month interest rate (% annual average)	Current account balance (% of GDP)	PSNB*** (% of GDP)
1979	3.7	4.8			13.7	-0.6	4.5
1980	-2.2	0.1			16.6	0.6	4.1
1981	-0.8	0.3			13.9	1.7	3.3
1982	2.1	1.2			12.2	0.7	2.5
1983	4.2	4.4			10.1	0.3	3.3
1984	2.3	2.5			10.0	-0.5	3.6
1985	4.1	5.1			12.2	-0.2	2.8
1986	3.2	6.5			10.9	-1	2.2
1987	5.6	5.4			9.7	-1.6	1.4
1988	5.9	7.8			10.4	-3.8	-0.7
1989	2.5	3.9		5.2	13.9	-4.3	-0.7
1990	0.6	0.7		7.0	14.8	-3.3	0.7
1991	-1.3	-0.8		7.5	11.5	-1.4	2.8
1992	0.4	1.2		4.3	9.6	-1.6	6.0
1993	2.6	3.1		2.5	5.9	-1.4	7.2
1994	4.0	3.3		2.0	5.5	-0.5	6.2
1995	2.5	2.1		2.6	6.7	-0.7	5.0
1996	2.7	4.2		2.5	6.0	-0.6	3.6
1997	3.1	4.9		1.8	6.8	-0.2	1.7
1998	3.4	4.4	0.3	1.6	7.3	-0.4	-0.1
1999	3.1	5.0	0.6	1.3	5.4	-2.5	-1.2
2000	3.8	5.3	2.3	0.8	6.1	-2.2	-1.5
2001	2.8	3.7	-1.7	1.2	5.0	-2	-0.7
2002	2.5	4.1	-2.4	1.3	4.0	-2.1	1.8
2003	3.3	3.7	-0.6	1.4	3.7	-1.7	2.8
2004	2.5	3.5	1.7	1.3	4.6	-1.8	3.1
2005	3.0	3.1	0.0	2.1	4.7	-1.2	3.5
2006	2.7	2.0	2.1	2.3	4.8	-2.3	2.6
2007	2.6	3.1	0.7	2.3	6.0	-2.5	2.7
2008	-0.5	-0.7	-2.8	3.6	5.5	-3.6	5.0
2009	-4.2	-3.4	-9.4	2.2	1.2	-3	10.4
2010	1.5	0.0	4.5	3.3	0.7	-2.8	9.3
2011	2.0	-0.1	2.1	4.5	0.9	-1.7	7.2
2012	1.2	2.0	-1.4	2.8	0.8	-3.3	7.7
2013	2.2	1.9	-1.1	2.6	0.5	-4.5	5.9
2014	2.9	2.6	2.7	1.5	0.5	-5.1	5.5
2015	2.2	3.0	-0.2	0.0	0.5	-5.4	4.4
Average over economic cycles****							
1979 - 1989	2.7	3.7			12.0	-0.4	2.7
1989 - 2000	2.3	3.0		3.5	8.5	-1.5	2.9
2000 - 2007	2.8	3.3	0.0	1.5	4.7	-1.9	1.7

* After the revisions to the national accounts data, pre-1998 data is not currently available ** Pre-1997 data estimated *** Public Sector Net Borrowing (calendar years excluding public sector banks)
**** Peak-to-peak for GDP relative to trend
Sources: ONS, Bank of England

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