Changing the world of work for good

How are we doing? The impact of Brexit at industry level

Congress House, Great Russell Street, London WC1B 3LS
020 7636 4030 www.tuc.org.uk

For more copies call 020 7467 1294 or email publications@tuc.org.uk

Please ask if you need an accessible format.

Contents

Section 1

Summary

Just over a year after the EU referendum, and a year and a half from the deadline for leaving the union, it's time to take stock of the impact that the decision to leave the EU has had on the UK economy so far. This report examines how the UK economy has fared over the last year, explores the effect on industries, assesses the risks these industries will face at the point when we actually leave, and sets out the action we believe government should take to mitigate these risks.

The headline is that changes resulting from the referendum have further damaged an economy weakened by the financial crisis of 2008 and eight years of austerity politics. The picture is one of stalling growth, falling real wages, low investment, and a growing dependence on consumer debt.

Looking in more detail at what's happening in individual industries: growth in wages, output and employment has slowed in most areas of the economy since the referendum, and real wages are rising in just three out of 18 industries.

Turning to the future, the risk of disruption to trade with the EU is focused in four sectors: business administration, professional, scientific and technical work, manufacturing, and finance. Approximately around three in five of the jobs and economic activity at risk are concentrated in these sectors, with 1.5 million jobs in these industries dependent on exports to EU member states.

The national economic picture

- GDP growth since 2010 has been just three quarters of the long-term average and the data from the last two quarters suggests we are experiencing a further slowdown.
- Following the decision to leave the EU, the value of the pound fell sharply, and has continued to fall. This has contributed to a further fall in real wages but has not helped reduce the UK's trade deficit. The devaluation helped push CPI inflation from 0.3% in the second quarter of 2016 to 2.7% a year later while nominal wage growth has slowed, resulting in a decline in disposable income and record low levels of saving.
- The weaker pound has also delivered a boost to exports of goods, as expected, by making UK goods cheaper abroad. But this was more than offset by an increase in imports, meaning the UK's trade balance has actually deteriorated. And services exports have fallen
- More alarming in the context of Brexit is the fact that the UK has become more dependent on exports to EU states over the last year. The latest quarter of data shows that exports of goods to the EU rose by 6.3%, while exports to the rest of the world increased by just 3.7%. Given the argument that increased trade with the rest of the world will offset any losses from leaving the EU single market, it is a concern that the

country's trade deficit with non EU countries rose 25% between the second quarters of 2016 and 2017.

What's happening where people work?

- Looking at the performance of different industries of the economy since last May, there have been considerably more losers than winners. GDP growth has slowed in three fifths of industrial sectors.
- This lacklustre performance has gone hand in hand with weaker wage growth. Workers in two out of three sectors saw reduced increases in their pay packets 2017. After taking into account inflation, the only areas of the economy to see significant pay increases are agriculture and the arts. This is in spite of relatively healthy productivity gains in half of the industries surveyed.
- These are also the only two sectors to have seen a pick up in the pace of employment growth. Elsewhere employment growth has slowed or stalled, most likely as a result of the weakened economy.

The risks ahead

- The risks posed by Brexit are varied, but looking simply at the reliance of different sectors of the economy on EU workers and EU exports, five areas of the economy stand out: manufacturing, agriculture, finance, hospitality and transport.
- Some of these areas make relatively modest contributions to UK employment and economic production. When looking at the potential loss of jobs and economic activity as a result of reduced trade with the EU, four sectors stand out: business administration, professional and technical services, manufacturing, and finance.
- Approximately 1.5 million jobs in these sectors currently directly depend on exports to EU member states. This accounts for approximately three out of five of those at risk. These sectors also account for around two-thirds of exports to EU countries, with more than £100bn of annual trade at risk from a Brexit deal that limits their access to EU markets.

What should government do?

Many of our economic problems pre-date the decision to leave the EU. But the additional risks posed by Brexit to our future prosperity make the need for government to step in now to protect jobs and growth all the greater.

Government should take action now and in the autumn budget to:

- Get serious about infrastructure investment. The OECD recommend that countries spend 3.5 per cent of GDP on infrastructure. Even if the full National Productivity and Infrastructure Spend is spent, the UK will be spending just 2.8 per cent.[1]

---

[1] https://www.ft.com/content/c907081e-80c7-11e7-94e2-c5b903247afd

- Set out an industrial strategy that recognises how important worker voice is to raising productivity gains and growth.
- Tackle the exploitation of migrant workers which undercuts existing wage levels and conditions, for example by closing loopholes in the rules for temporary agency workers as recommended by the Taylor review as well as working with others to strengthen EU rules on posted workers.
- Direct more of the tax contribution migrant workers make to the communities that need extra resources for schools, hospitals and housing through a much-expanded migration impacts fund, as part of a general boost for spending on quality public services.
- Make it clear that the great repeal bill will include a cast iron guarantee that no workers' rights that come from the EU will be diluted.

The TUC respects the decision taken in the referendum that the UK should leave the EU. Our priority now is to ensure that working people do not pay a price in terms of their jobs and livelihoods for the decision. As this report has set out, considerable numbers of jobs are at risk.

We believe that within the negotiations:

- Unions should have a seat at the table when the future of work is negotiated, in order to ensure that working people's rights are protected.
- Jobs, investments and livelihoods must be protected through tariff free, barrier free trade with Europe. That means government should seek a transitional period after leaving the EU in March 2019. During this period, the status quo should prevail. The UK should remain a member of the single market and customs union, as this is the best way to guarantee access to European markets, to ensure that workers are covered by EU workplace rights, and to prevent job-destroying disruption and uncertainty.
- We should keep all options on the table when it comes to the shape of our future trading relationship with the EU. The best way currently on offer to protect jobs, rights and livelihoods is to stay in the single market and customs union beyond the transitional period. While there may be alternatives, they must meet our tests of maintaining workers' rights and job preserving tariff- free, barrier free trade with the rest of Europe.

Section 2

The national economic picture

A year after the referendum, we are little closer to knowing what the shape of the final Brexit deal will look like, and its impact on the economy in the long term. But we are starting to get a clearer impression of the impact of this ongoing uncertainty on business decisions, and we can see clearly the impact that the sharp fall in the value of the pound has had on prices.

This section takes a broad look at economic growth over the past year, before turning to a more detailed analysis by industry in the next section.

It shows that growth has slowed, real wages are falling, and there is a worrying increase in consumer debt.

Not all of the economic trends we see today should be attributed to Brexit. In fact, many of the trends we report were in place before the decision was taken to leave the EU, and reflect the ongoing imposition of austerity since 2010. But the decision to leave the EU appears to have exacerbated many of these trends; weak demand from government is now coupled with weak business investment in an uncertain environment. And the reliance on consumer spending to prop up the economy is looking increasingly like an unsustainable strategy in the face of rising prices and falling wages.

Below we look at what's happened to growth, at household income and consumer demand, at trade, and finally at investment and government spending.

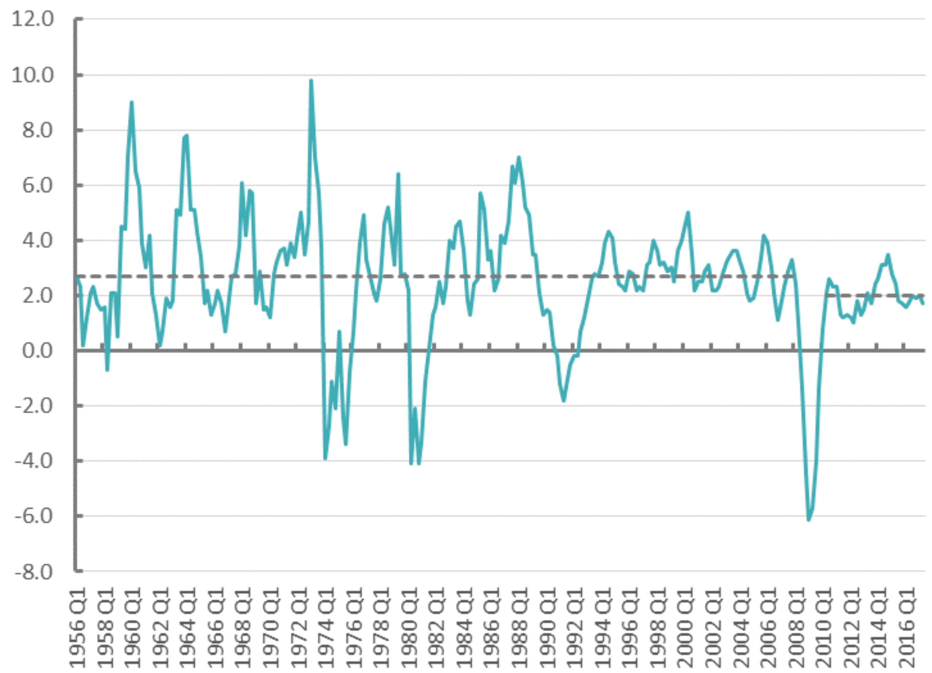
Growth since the referendum

In the wake of the financial crisis, the ongoing imposition of austerity and now uncertainty after the EU referendum, economic growth has been reduced by a quarter. GDP growth has averaged 2.0 per cent since 2010, well below the longer-term average of 2.7 per cent.

Figure 1 shows how the modest revival in activity over the second half of 2014 and first half of 2015 (fostered by a policy reversal in the run up to the general election – see Figure 8) has now decisively weakened.

GDP figures now extend to the second quarter of 2017, with four quarter growth at 1.7 per cent – the same figure as a year ago. However looked at on a quarterly basis weaker growth is more evident, with quarterly growth of 0.2 and 0.3 per cent respectively over the first two quarters of 2017, a fall from the growth rates of 0.5 and 0.7 per cent in the last two quarters of 2016.

Figure 1: Long-run GDP, % four quarter growth



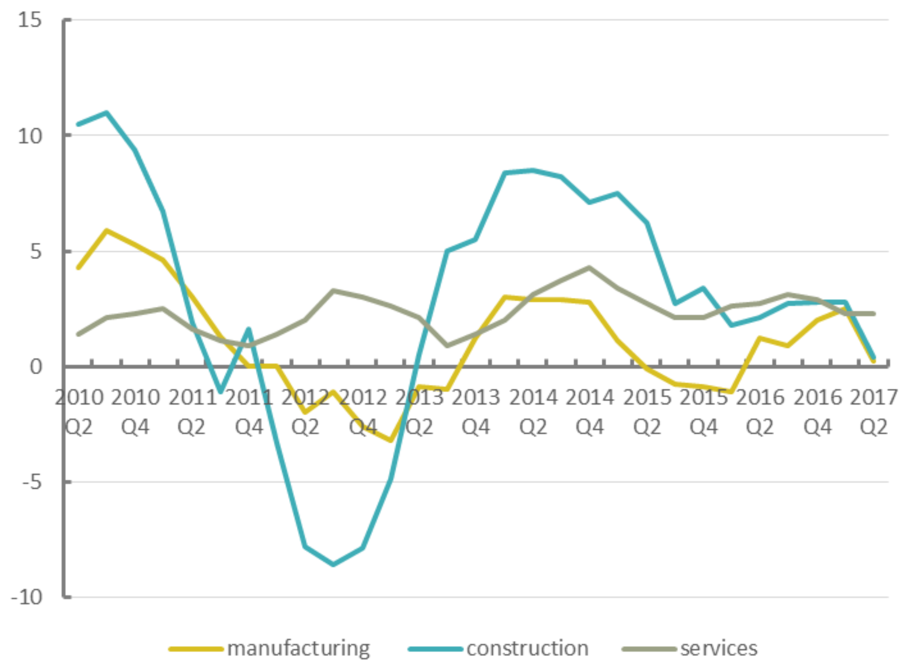
Source: ONS

Taking an initial look at an industry level, before the more detailed analysis in section two, shows more evidence of weakness across the economy. Manufacturing, energy production and extraction and construction growth have slowed significantly, and while growth in the service sector is outperforming other industries, it is weaker than it was last year.

In 2017 Q2 four quarter growth was

- 0.2 per cent in manufacturing (it was last lower in 2016 Q1 when it fell by -1.1 per cent).
- 0.4 per cent in construction (last lower in 2013 Q2 when 0.5 per cent)
- 2.3 per cent in services (last lower in 2015 Q4 at 2.1 per cent).

Figure 2: Industries, % four quarter growth



Source: ONS

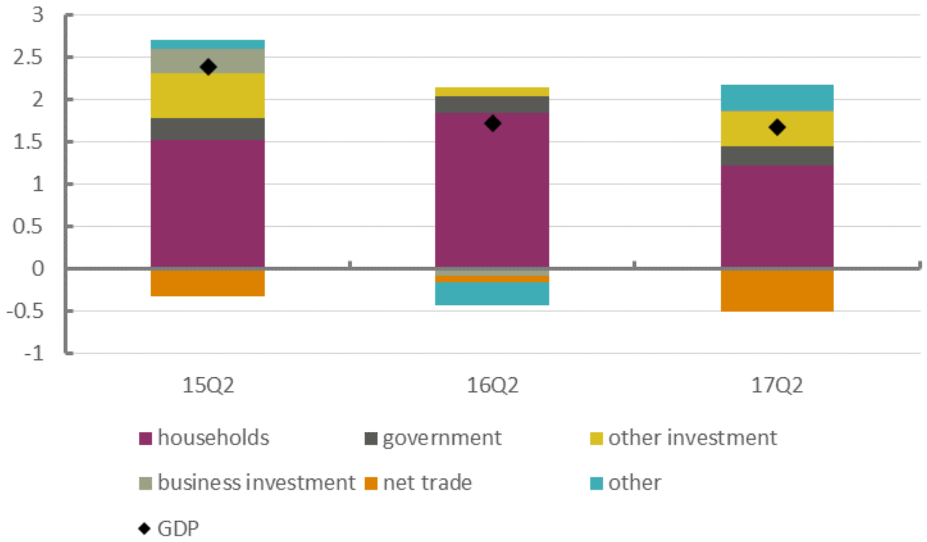
Incomes, wages, employment and consumer demand

The most obvious impact of the referendum has been the effect of the sterling devaluation on inflation. The lower value of the pound has fed through into higher prices as companies pay more for overseas goods, with CPI rising over one year from 0.3 per cent in Q2 2016 to 2.7 per cent in Q2 2017.

Coupled with a reduction in nominal wage growth, real wages have rapidly moved back into negative territory across most industries, as we set out further in section two. And combined with a freeze in the value of most social security benefits, this has seen real household disposable incomes fall since the second quarter of 2017, with the annual decline of 1.3 per cent the steepest for over five years (since 2011Q4 when -2.3 per cent).

On the back of slowing incomes, consumer demand has weakened significantly. Nonetheless, in the absence of business investment and an increasingly negative contribution from net trade, consumer demand remains the main driver of economic growth. Four quarter growth of 2.0 per cent accounts for three quarters of overall GDP growth.

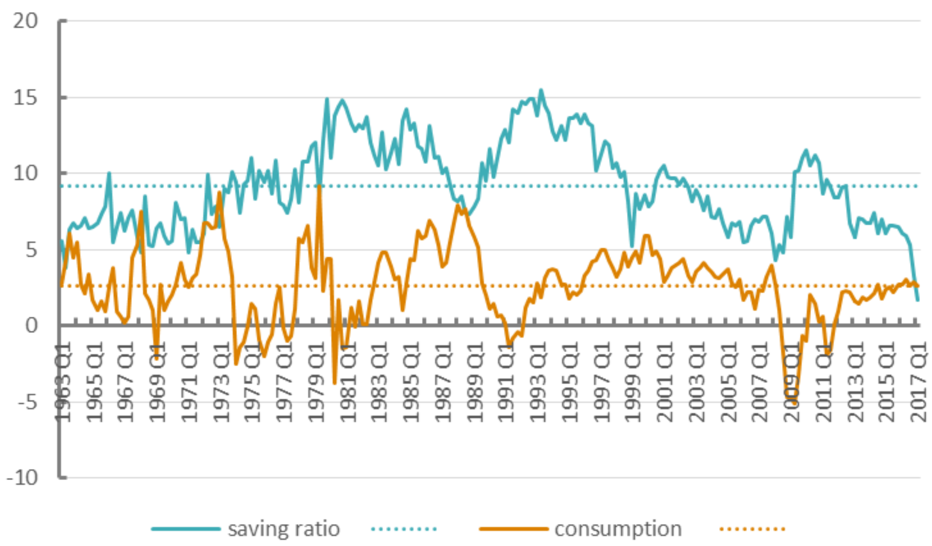
Figure 3: contributions to 4Q growth in 2015Q2 2016 Q2 and 2017 Q2.



The reliance on consumer demand at a time when incomes are being squeezed is putting new stress on household finances. The savings ratio of 1.7 per cent in Q1 2017 was the lowest on record by some margin. It has been below 4 per cent only on two occasions, the previous quarter and in 1963 Q2; it has never before been below 3 per cent and the long-term average is 9 per cent (see the red dotted line on Figure 4 below).

It's important to note that this is a result of low incomes, rather than excessive spending. While saving is way below the long-term average, consumer spending four quarter growth of 2.6 per cent in the corresponding quarter (2017Q1) was exactly at the long-term average.

Figure 4: Household spending annual growth and the saving ratio, per cent



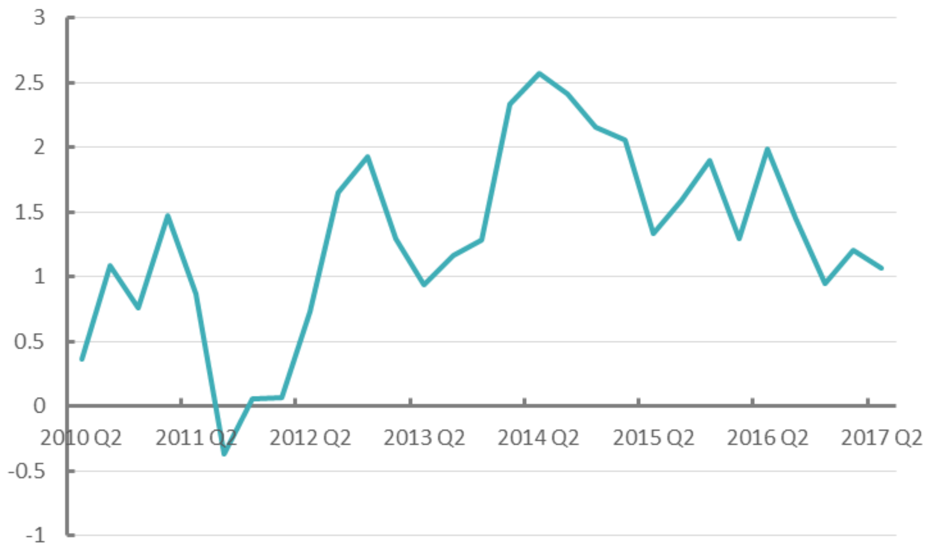
Source: ONS

In parallel to the decline in the saving ratio, unsecured credit is growing at an alarming pace. This year, household unsecured debt is set to be higher than ever before – with TUC analysis of OBR figures showing a rise to a record £13,900 per household in 2017.

The flip side of the wages story, and the better news from workers' perspective is in the employment figures. Over the year since the referendum, employment levels continue to rise, although the rate of employment growth has slowed. Four quarter growth is down from a peak of 2.8 per cent in 2014Q2, slowing to 2.0 per cent in 2016 Q2 (ahead of the referendum) and now down to 1.1 per cent in 2017Q2 (Figure 5).

On one hand these gains are exceptional on the basis of the experience of the last 40 years. But on the other hand, since the recession, increases in employment have been disproportionately concentrated in lower quality work, as suggested by unprecedented lows in the aggregate productivity and wages figures. Some regard a slowdown in employment growth as inevitable given perceived shortages of skilled workers, but ongoing reductions in wage growth seem to suggest that there may be greater slack in the labour market than the headline figures suggest.

Figure 5: LFS employment, % four quarter growth



Source: ONS

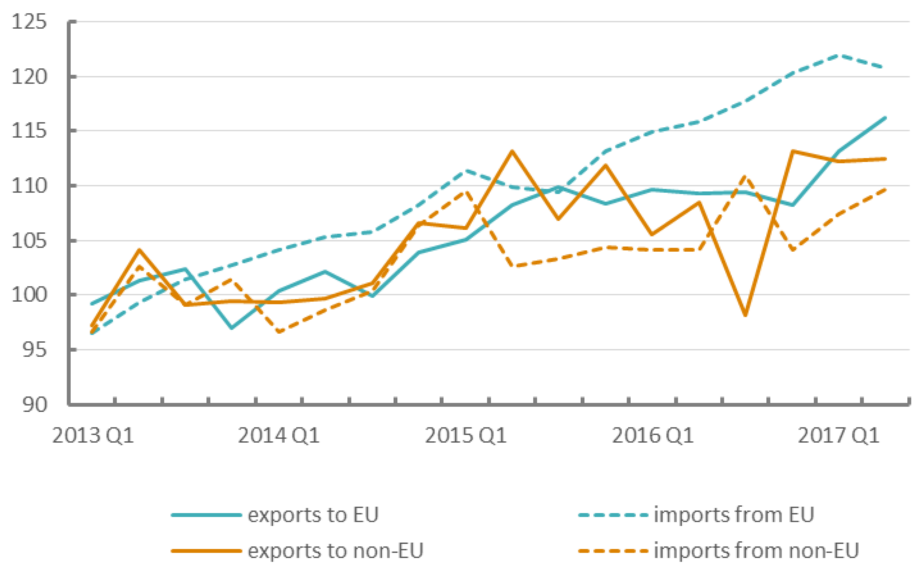
Exports, imports and net trade

Over the year since the referendum, the trade story is complex to unravel – with different outcomes for goods and services and for relations with EU and non-EU countries. The fall in the value of the pound has seemingly provided a boost to demand for UK goods. However as the Engineering and Employment Federation among other have pointed out, the devaluation impact is complex, given the dependence of manufacturers on imported materials and components.[2] As a result, the increase in exports has been matched almost exactly by a corresponding increase in imports. While trade in goods expanded by 5.0 per cent between Q2 2016 and Q2 2017, imports also rose by 4.7 per cent. With imports larger in cash terms, this means a deterioration in the balance of trade on goods.

The picture for services is more categorically negative, with exports declining by 1.3 per cent on the year to 2017Q2 and imports up by 0.5 per cent.

The position on goods is a little more nuanced when we separate trade with EU and non-EU countries (NB this can't be done for services until annual estimates are available much later). The relative deterioration in the balance of trade has been worse for non-EU countries than EU countries.

Figure 6: Trade volumes, volume indices 2013=100



Having been fairly stagnant over 2016, export volumes to EU countries expanded relatively vigorously into 2017. This is against the backdrop of a long-standing expansion of UK imports from the EU, and only a slight weakening into the most recent quarter. Between 2016 Q2 and 2017 Q2 exports to the EU rose 6.3% and imports from the EU 4.3%.

Non-EU trade figures are more volatile, with a strange switch in 2016 Q3, and flatter growth after a sharp rise into 2016 Q4. UK import growth from non-EU countries has been flatter than for EU imports, though this picked up into 2017. Between 2016 Q2 and 2017 Q2 non-EU exports rose 3.7% and non-EU imports 5.3%.

The index numbers do not map directly to trade balances, because they show the position of volumes relative to a specific point in time (2013). But the relative movements mean that the main fall in the balance of trade has been driven by non-EU countries. Over 2016 Q2 to

---

2 https://www.eef.org.uk/campaigning/news-blogs-and-publications/blogs/2016/oct/what-does-the-sterling-depreciation-actually-mean-for-uk-manufacturers

2017 Q2, the EU trade in goods deficit increased by £0.9bn from £23.1bn to £24.0bn. Meanwhile the non-EU deficit rose by £2.6bn, from £7.8bn to £10.4bn. The figures once again highlight the importance of trade with the EU to the UK economy. The final section of this report looks at which sectors of the economy will be most affected if the pattern of this trade is altered by the final Brexit deal.

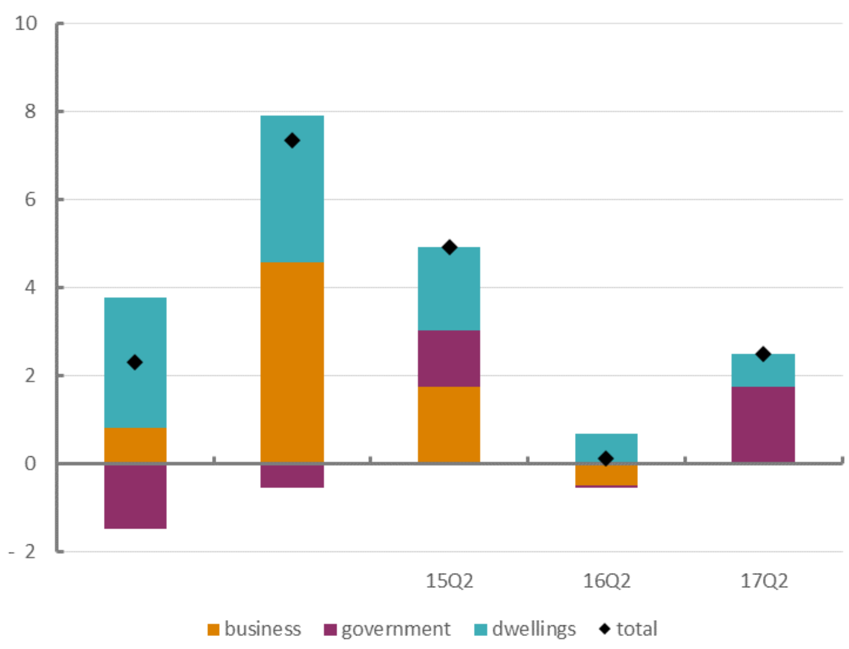
Investment and government spending

Investment growth has been slow since 2015, following a brief revival in 2014. But as Figure 7 shows, even when total investment was at its strongest in 2014, housing investment was accounting for a large part of growth.

As a result of government cuts, the contribution from government investment has been sporadic and slight. And despite exceptionally low interest rates, and significant corporation tax cuts, businesses remain reluctant to invest – with a decline in the year to 2016Q2 and zero growth this year. The Bank of England argue that some of this is due to the uncertainty related to Brexit, with the Banks Agents reporting that 'uncertainty surrounding the United Kingdom's future trading arrangements has meant that some larger firms, and those more exposed to a potential change in trading arrangements, have been delaying medium and longer-term investment plans.' [3]

In 2017 the small growth we have seen is accounted for by housebuilding and government investment – we look further at the latter below.

Figure 7: Investment, percentage point contributions to four quarter growth



Source: ONS

[3] Bank of England (2017) *Inflation Report, August 2017*.

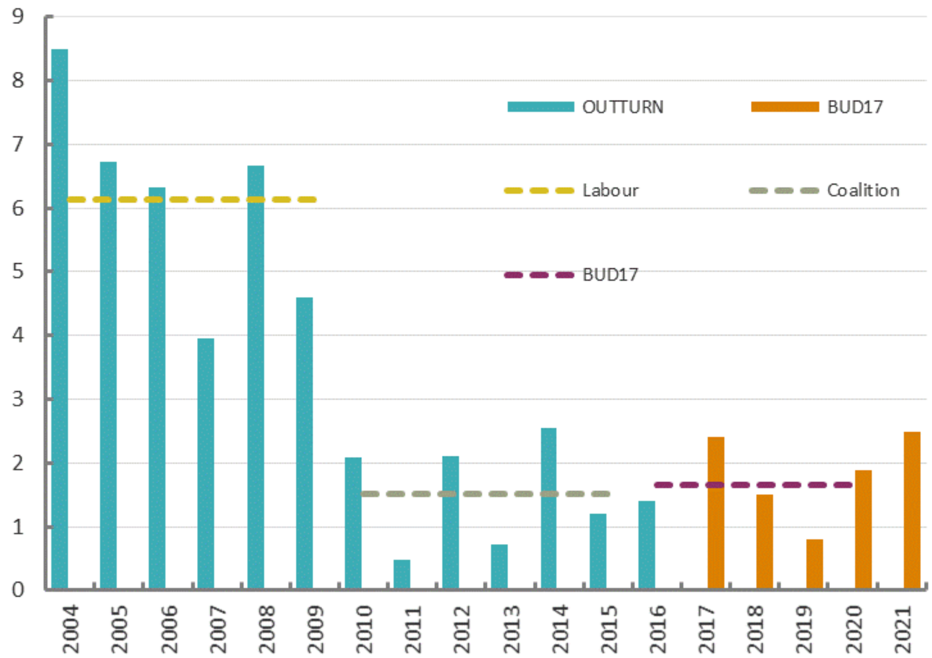
Government spending

With business unwilling to invest, and government facing record low borrowing costs, there is a clear case for government investment to help support the economy. The chart above suggests that government has recognised this need. Government investment rose by 11.4 per cent in the year to 2017Q2, the highest figure since 2014Q1 when 24.9 per cent and accounting for the majority of whole economy investment growth.

Likewise, Philip Hammond's £23bn 'National Productivity and Investment Fund' (NPIF), announced in the Autumn 2016 budget, seemed to be a recognition that in the absence of other sources of demand, government would need to step in.

However, looked at over the longer term, the level of government investment remains minimal. Figure 8 shows that over the course of this parliament the government will expand current and investment expenditures by an average of 1.6 per cent a year, only marginally higher than the last parliament when growth was 1.3 per cent a year (and despite the new infrastructure fund, overall government investment as a share of GDP will be lower this parliament than the last). But growth is relatively volatile from year to year – strikingly the strongest growth since 2009 was in 2014, just ahead of the election (2017 is predicted also to be relatively less weak).

Figure 8: Government consumption and investment spending (nominal), annual growth



Source: ONS and OBR

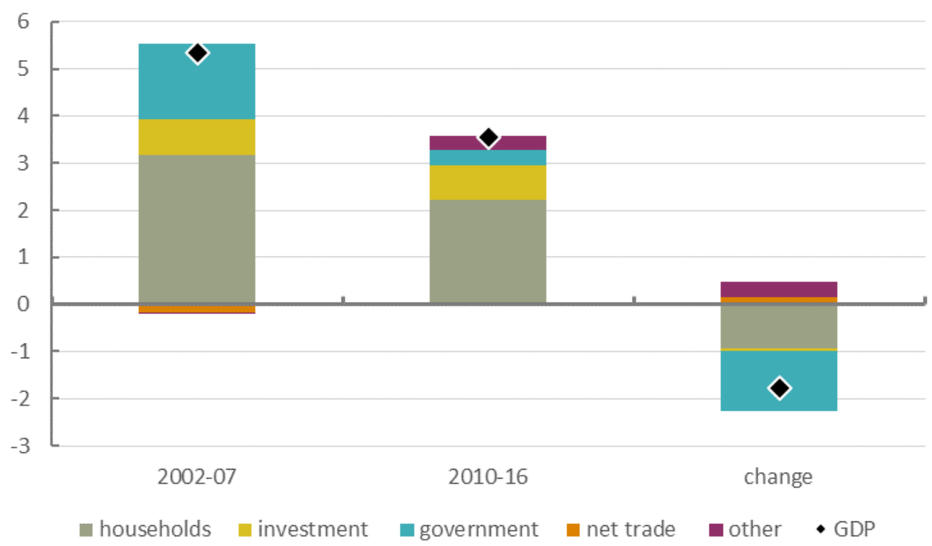
While still technically an expansion of spending, government expenditure growth is greatly reduced relative to the pre-crisis period as well as long-standing historic norms. Given inflation and population growth, weak growth amounts to a very prolonged and very severe period of spending cuts, with serious consequences for public services and public servants. In March the Office for Budgetary Responsibility showed cuts to per head real departmental spending continuing in every year from now until at least 2021-22.[4]

The impact of government spending on the economy

These cuts have been justified by the need to reduce the deficit between government income and expenditure, and the overall level of government debt. When government spending was cut, private sector spending was expected to expand to make up for the shortfall in public sector demand

However, as we set out earlier, there has been little sign that businesses have been willing to invest to fill the gap left by government. Instead weaker government spending growth has led directly to weaker growth, as Figure 9 shows.[5] While household spending is reduced relative to pre-crisis years, it now accounts for a larger share of GDP growth – and therefore households are taking more of the strain of supporting the economy.

Figure 9: Contributions to nominal GDP growth, percentage points



Source: ONS and TUC calculations

The slowdown in economic growth has also left the government failing even on its own terms. Deficit reduction has proceeded much more slowly than anticipated, and the public debt ratio has not been reduced. The coalition government inherited plans from Labour

---

[4] Economic and Fiscal Outlook, March 2017, Chart 4.6.

[5] The chart compares nominal GDP growth and demand by sector before and after the crisis. See 'The Price of Austerity', TUC, March 2015 for a more detailed discussion.

that had the debt ratio peaking at 74% of GDP. Under the coalition's initial (2010) plans, debt was set to peak sooner (2013-14) and at a lower 70% of GDP. The debt ratio is now set to rise to a peak of 89% of GDP this financial year and so not be reduced until 2018-19.

Conclusions

The slowdown in the long-term rate of economic growth pre-dated the referendum, with the ongoing impact of public spending cuts, and low wages leading to an economy that is over-reliant on increasingly stretched consumers.

But the impact of the referendum appears to have been to make businesses more reluctant to invest, while the fall in the value of the pound has seen prices rise, and the value of real wages fall. One brighter spot comes from the increase in exports – though this has been more than offset by higher imports. And with most export growth coming from the EU – the result of a stronger economy in the Eurozone, as well as a weaker pound, the shape of the Brexit deal looks set to be even more important for future economic prospects.

The next section of the report takes a more detailed look at industry level, to understand more clearly what is driving the slowdown in jobs and wages over the last year.

Section 3

What's happening where people work?

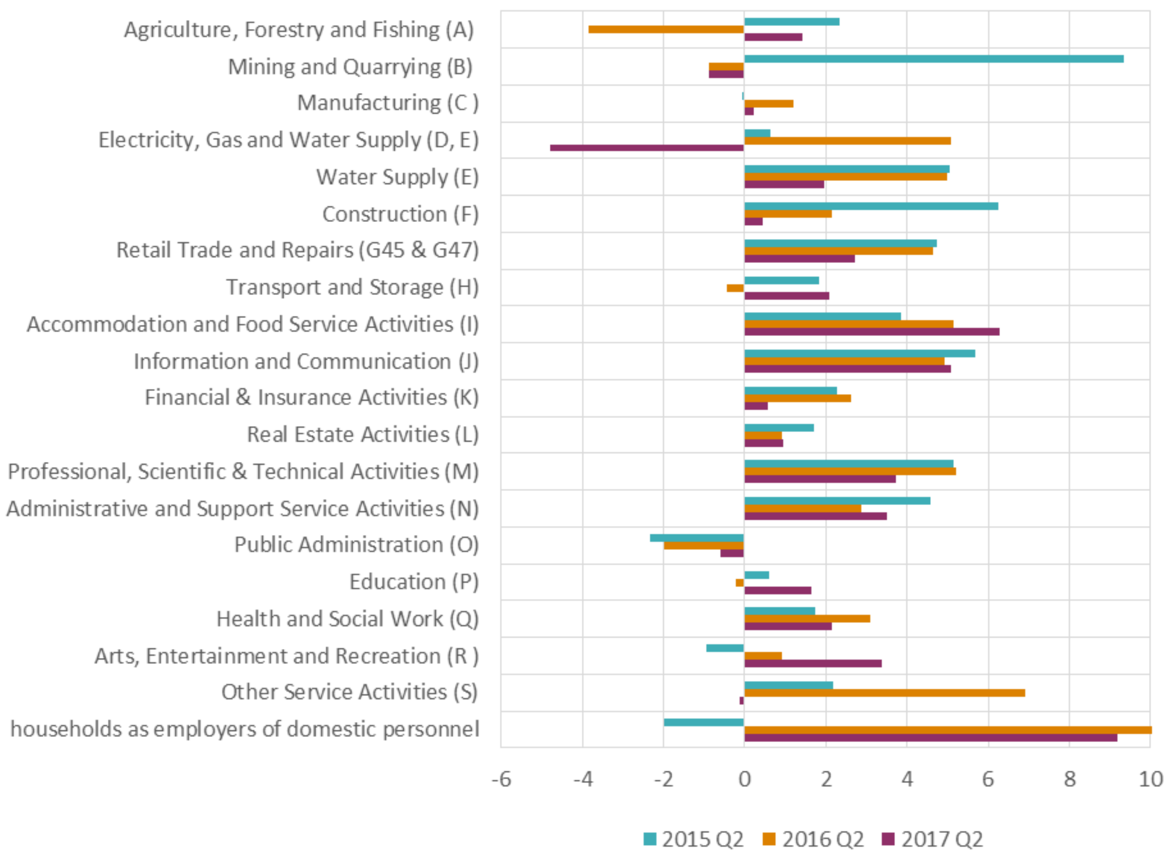
The previous section of this report looked at trends in the economy at national level. But the impact on individual workers' jobs and wages will depend on what's happening in the industry in which they work. Here we look in detail at the industry level data. We find that GDP growth has stalled in three out of five industries, and that the only industries seeing significant real wage growth are agriculture and the arts, entertainment and recreation.

Output

Figure 10 shows output growth across industries, using the standard industrial classification (see box on p. 14). It compares the four quarter growth to quarter two in 2015, 2016 and 2017, with the change in growth between 2016 and 2017 indicative of how different parts of the economy have operated since the referendum in June 2016.

Over 2017, growth has slowed in 11 of 20 industries – just over half.

Figure 10: Output growth, % quarter on a year ago

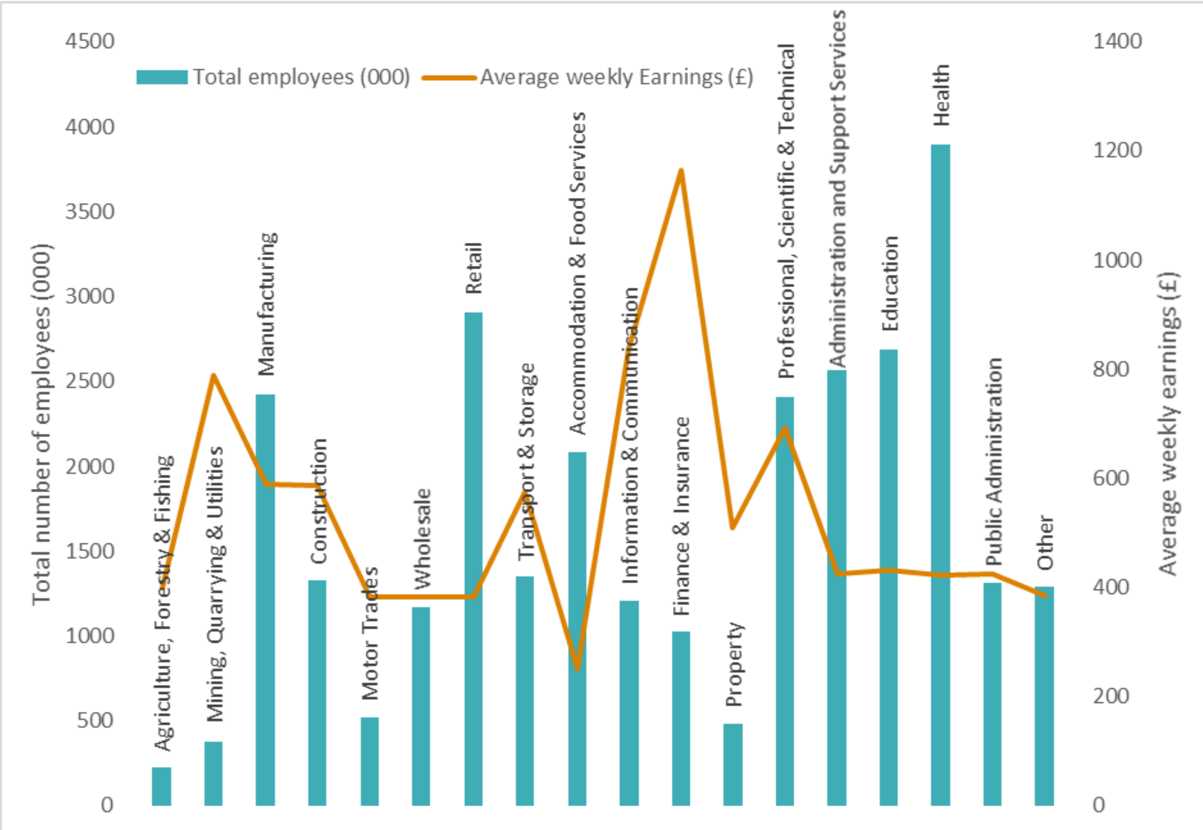


Source: ONS and TUC calculations

Box: industrial classification

Statistics by industry tend to be presented according to the European NACE classification (Rev. 2)[6] . In this report results are presented using the broad 'section ' categories, indicated by letters from A to T. Note industries can differ greatly in size, so comparisons are not necessarily like for like – for example agriculture is greatly smaller than 'professional, scientific and technical activities', and 'households as employers of domestic personnel' is very small. The advantage is that the ONS publish a wide range of statistics on this basis and so comparisons can be made across different types of outcome: notably output, wages, employment and productivity.

Figure 11: Number of employees and weekly earnings in industries



Source: ONS

[6] Statistical classification of economic activities

in the European Community, Eurostat, http://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF

Service sector industries

Looking first at where the service sector is growing:

One of two stand-out areas of strong and rising growth **is 'accommodation and food services'**: this is dominated by surging activity in 'food and beverage service activities', with growth in 2017 of 8.2 per cent following 4.5 per cent in 2016. Growth in accommodation services however has slowed from 6.8 per cent to 1.4 per cent.

- Likewise growth in **'information and communication technologies'** was 5.1 per cent in 2017 following 4.9 per cent in 2016, perhaps emphasising the efficacy of well-aimed subsidy (with the government's 'creative industry tax reliefs' operating across film, TV, video games, theatre and music) . Over the last three years 'motion picture, video and TV programme production, sound recording and music publishing', grew by 32.3 per cent, 2.6 per cent and 23.3 per cent. 'Programming and broadcast activities' grew by 1.7 per cent, 13.4 per cent and 9.5 per cent.
- There was also modest growth in the **transportation, agriculture and real estate industries.**
- Growth in (private sector) **administrative and support service industries** picked up again in 2017 to a relatively robust 3.5 per cent. This presumably comes at the expense of 'public administration', which declined for the third year in a row, but by a little less into 2017.
- Lastly, in **education**, a decline in 2016 gave way to modest growth in 2017.

Turning to those service sector industries where growth is slowing:,

- **Energy production,** and **distribution and water industries** declined or slowed sharply.
- **Wholesale and retail slowed**, though this was dominated by a sharp slowdown in vehicle retail and wholesale from 11.3 per cent in 2016 to -0.2 per cent in 2017; while slightly weaker retail growth echoes weaker consumer demand, this was offset by stronger wholesaling activity.
- Declines in **insurance, pension and financial auxiliary service industries** are causing the weaker growth in the finance sector, offsetting unspectacular but steady growth in banking activities (averaging 2.1 per cent over the last three years); plainly overall growth here is vastly weaker than the excesses ahead of the crisis (averaging around 7 per cent growth a year).
- **Professional, scientific and technical activities** weakened following 'head office and management consultant' slowing from a very rapid 16.1 per cent last year to a still rapid 7.0 per cent this year, and architectural services slowing from 6.0 to 0.9 per cent; the weakening was partly offset by both legal and bookkeeping services bouncing back from declines in 2016 to expansion in 2017.

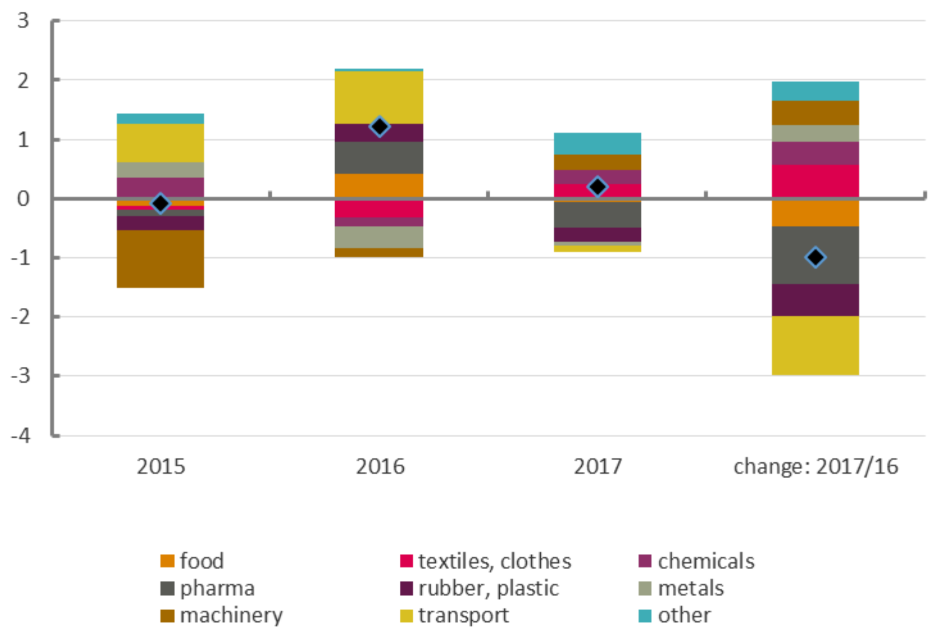
The overall picture is of increasingly lacklustre growth across the board, with only a handful of industries bucking the trend.

Manufacturing

The manufacturing sector accounts for only 10 per cent of total output, but 55 per cent of exports, and therefore is likely to be more exposed to any changes in trade arrangements as a result of Brexit.

Figure 12 shows the key contributions from different sectors of manufacturing to annual manufacturing growth over the last three years, and the overall change into the latest year.

Figure 12: Index of manufacturing, contributions to four quarter growth, ppts



Source: ONS and TUC calculations

- The most striking change is **transport**, mostly accounted for by the production of motor vehicles. Vigorous growth in 2015 and 2016 turned negative in 2017. Looking in more detail shows the impact of vehicles within transport as a whole has been reduced a little by a stronger growth in ships and boats, following a decline in 2016.
- The change here echoes the position on sales of motor vehicles. The expansion of activity has been fostered by 'personal contract purchase' financing, and there is a suggestion that this sector is fragile – with emerging worries of sub-prime auto lending (echoing the US). The amount of sterling bank net lending to 'machinery, equipment and transport equipment' industries has declined by £500m (7½ per cent) over the past two months. At the same time, firms owned overseas may be reducing the scale of their UK operations given ongoing uncertainties around future trading relations with Europe.
- Other industries with significantly lower growth in 2017 are '**pharmaceuticals products**', '**rubber and plastic and non-metallic mineral products**'.

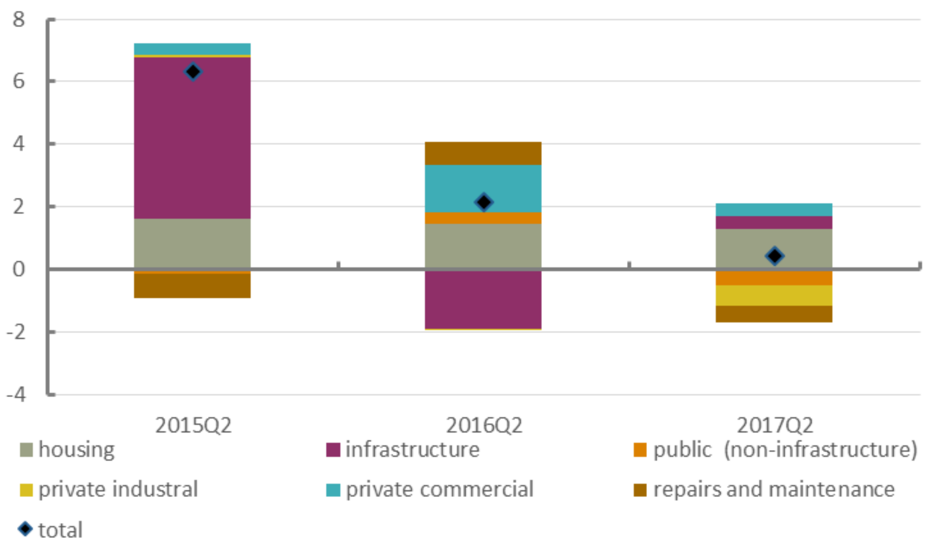
There are some stronger areas.

- The large decline in 'basic metals and metal products' following the crisis in the **steel industry** last year has now levelled off.
- Declines in 2016 gave way to robust growth in 2017 for the following industries: **textiles, chemicals, computer and electronic products, electrical equipment and other machinery.**

Construction

Construction activity has slowed significantly over the past two years (Figure 13). The weakening into 2016 followed reduced infrastructure spending growth; infrastructure spending has remained weak into 2017, and there was also a fall in 'private industrial' investment as well as 'repairs and maintenance' and 'public (non-infrastructure)'. The one area supporting growth throughout is housing, though this should not be confused with construction on an adequate scale for the needs of the country.

Figure 13: Index of construction, contributions to four quarter growth



Source: ONS and TUC calculations

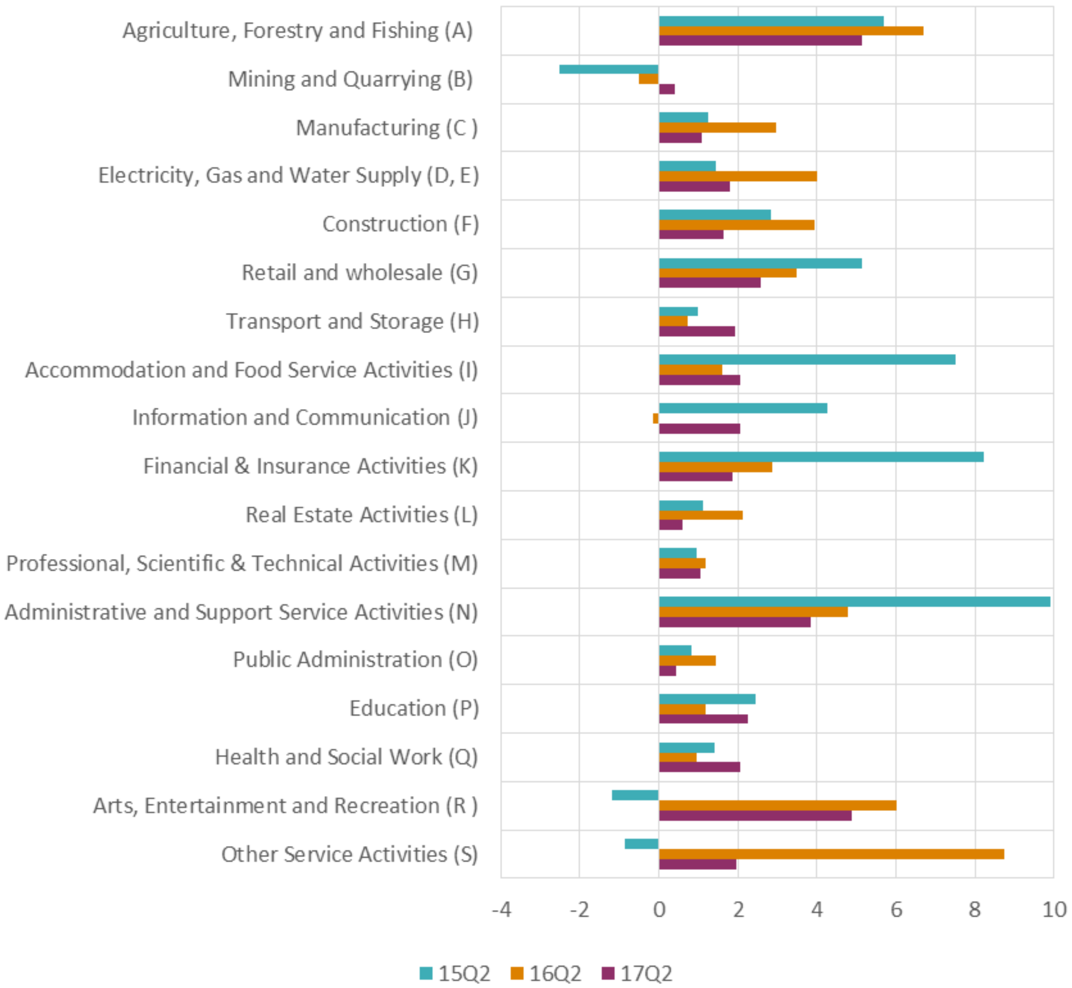
Wages

Slower growth in these industries is being reflected in lower wages for workers. Looking first at nominal wages – that is, wages before inflation is taken into account:

- Workers in two-thirds of industries (12 out of 18) are seeing a slowdown in wages.
- Pay growth has fallen by over 50 per cent **in manufacturing,** electricity, gas and water supply, construction, real estate, **public administration** and other services.

- The other industries where pay growth is falling are **agriculture, retail and wholesale, financial and insurance, professional, scientific and technical, administrative and support services, arts and entertainment.**

Figure 14: AWE growth (excluding bonuses), % quarter on a year ago



Source: ONS and TUC calculations

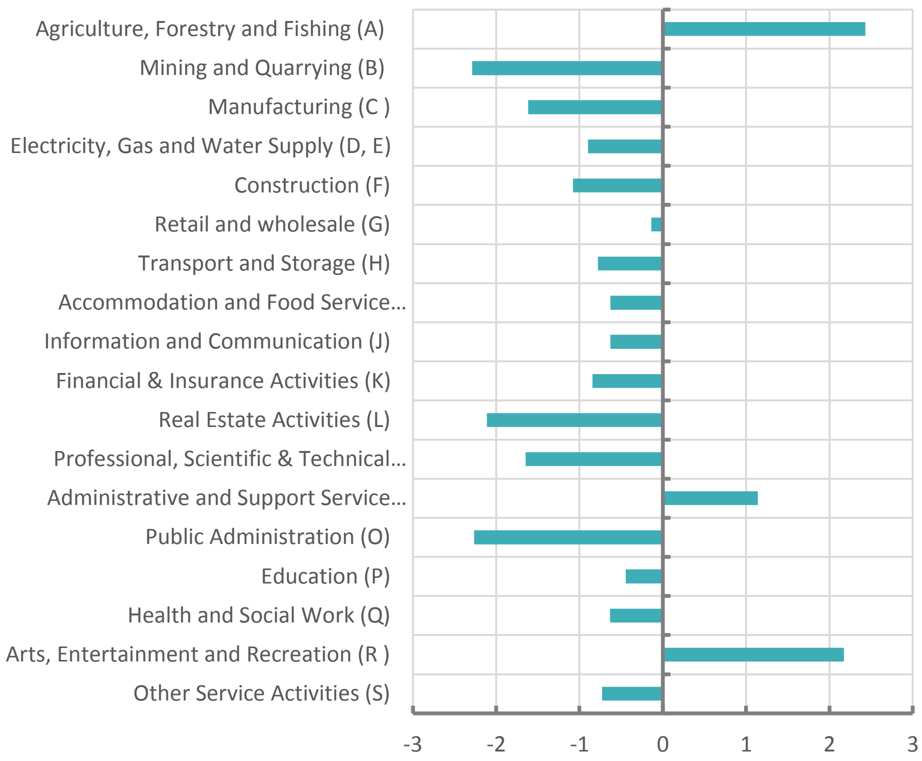
However, the value of pay packets depends not only on their cash value, but on what is happening to prices. With inflation rising rapidly since the referendum, real wages have started to fall again.

Figure 14 shows that in the second quarter of 2017 there were only three industries where real pay growth was positive (or one in six). While the public sector pay freeze is obviously putting pressure on public sector workers, private sector workers are also experiencing falls in their real pay.

Looking at the only sectors where real wages are growing:

- Pay growth is above 2 per cent in **agriculture, forestry and fishing** (2.4 per cent) and **arts, entertainment and recreation** (2.2 per cent).
- Pay is still positive in **administrative and support services** at 1.1 per cent

Figure 15: Real pay growth in year to 2017Q2, %



Source: ONS and TUC calculations

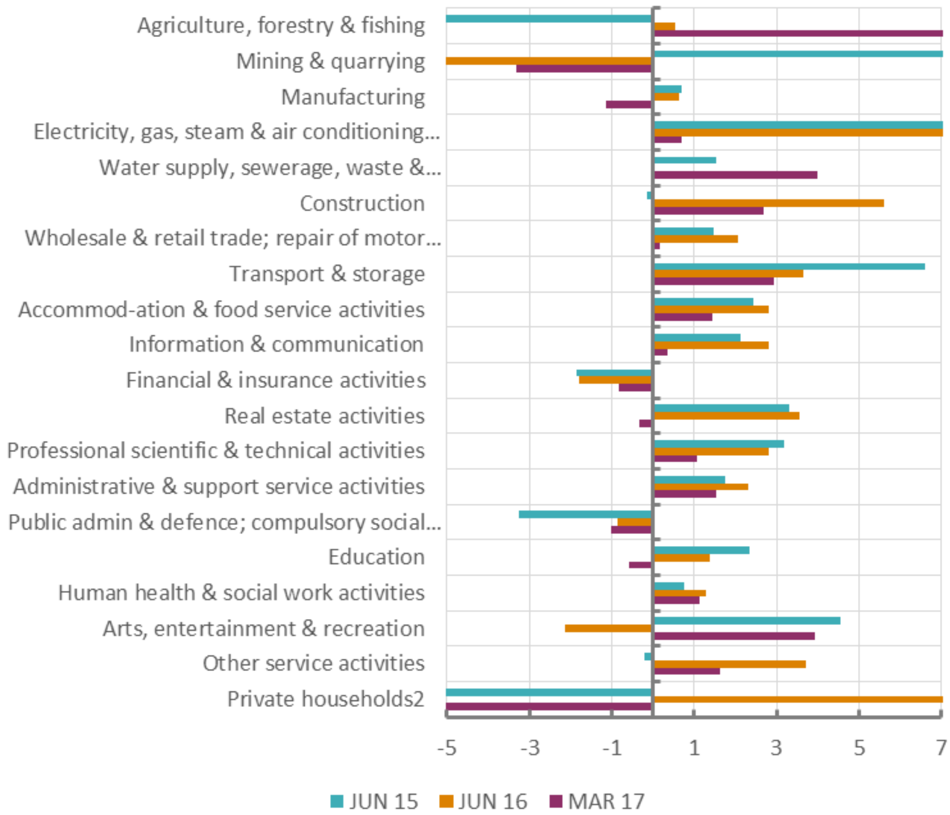
Employment

There is better news in the jobs figures, where employment continues to grow. However the rate of employment growth is now slowing across nearly all industries. In contrast to the headline statistics (Figure 5), industry figures ('workforce jobs') extend only to 2017Q1 and show employment growth slowing to 1.3 per cent from 2.0 per cent in the second quarter of 2016.

- The only industries showing the rate of employment growth pick up are **agriculture, water supply,** and **arts and entertainment**.
- In the **financial and insurance industries**, employment growth is faster than last year, although still negative.
- In the remaining four fifths of industries, employment growth has slowed.

- Employment levels are falling in **mining and quarrying, manufacturing and real estate activities**, as well as in **public sector administration**, and **defence** and **education**.

Figure 16: Employment, % four quarter growth

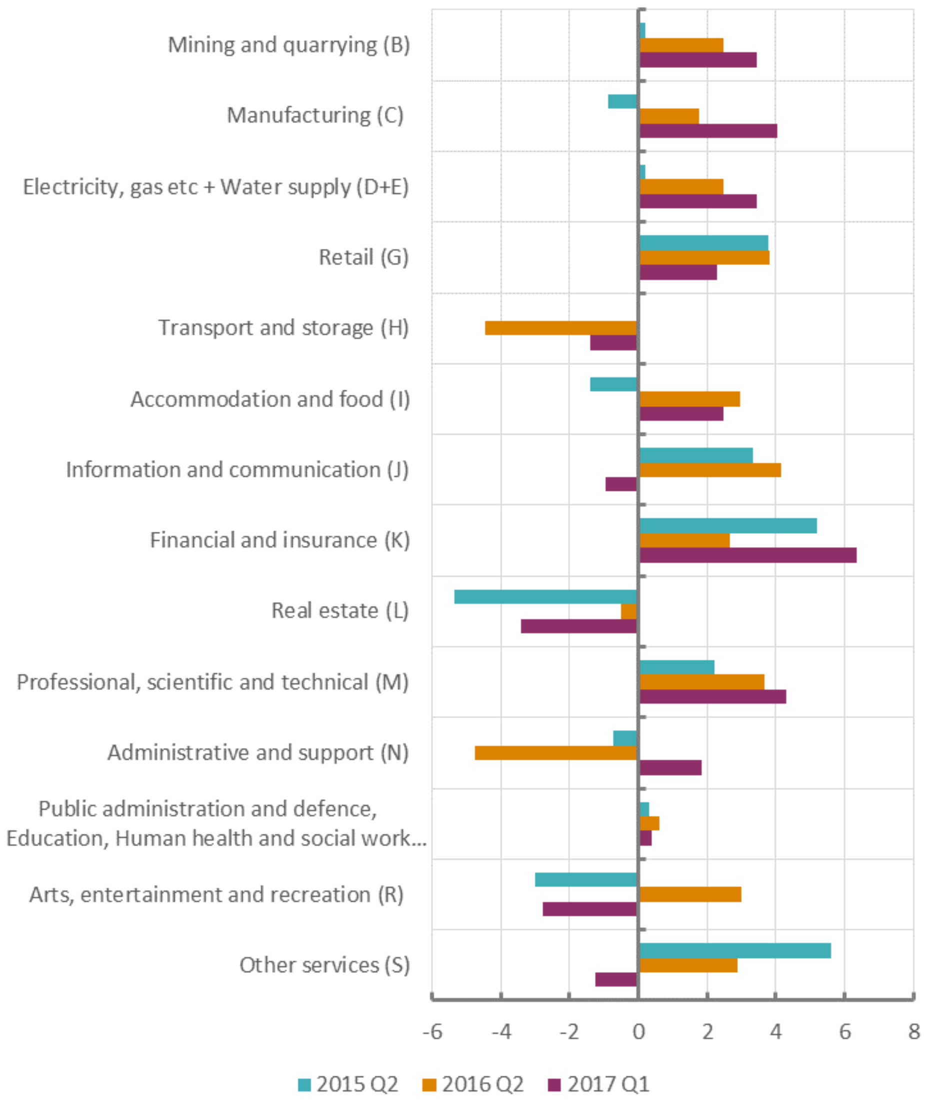


Source: ONS; Note the axis has been cut off for clarity; agriculture employment grew by -12% in 2015 and 11% in 2016; mining by 12% in 2015 and -19% in 2016; private households by -27% in 2015, 13% in 2016 and -13% in 2017.

Productivity

According to conventional theory, earnings increases should follow productivity. And in the headline figures, low wage growth corresponds to low productivity growth. But the industry comparison shows a less clear-cut picture (note the coverage is of fewer industries), with productivity above two per cent in half (7 of 14) of UK industries and productivity growth rising on the year in 6 of 14 industries. This is very far from an obvious match with the wage figures above, where only three industries have positive real wages and these are not those with the highest productivity.

Figure 17: Productivity, % growth quarter on year



Source: ONS

Conclusion

Looking across the sectors of the economy gives a better picture of how ongoing uncertainty is affecting workers in different industries. Workers across the great majority of industries are already seeing their real pay slow, and only three in five industries are seeing signs of growth.

But what happens to jobs and wages in the future will depend on the eventual shape of the Brexit deal. The next section therefore looks at which sectors face the most risks from a Brexit deal that changes policy on either trade or immigration.

Future risks

Different industries face different levels of exposure to the risks posed by leaving the EU. Some sectors, like manufacturing and agriculture, rely heavily on workers from other EU states and could face labour and skills shortages after Brexit. Other areas of the economy, such as finance and mining, rely heavily on exports, around half of which currently go to fellow EU member states.

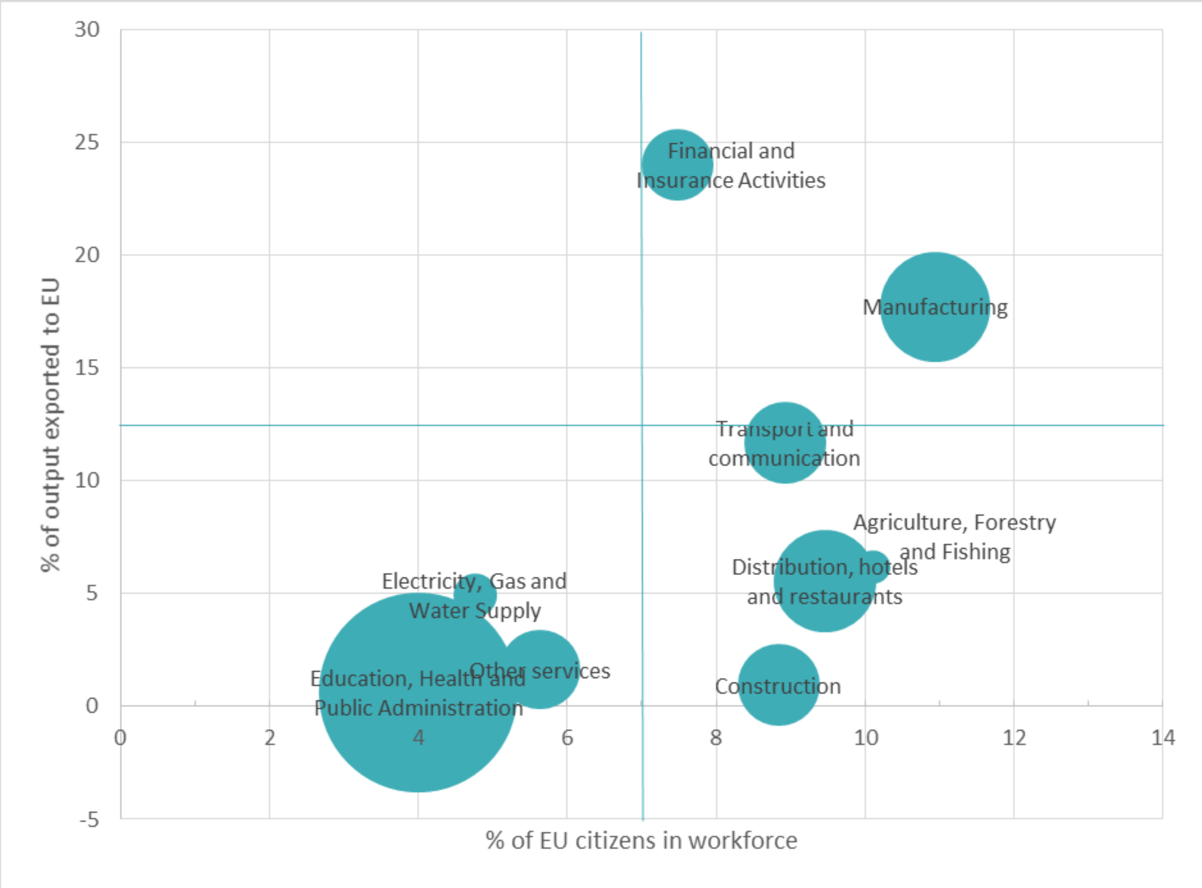
The following section includes estimates of how much risk different industries face, and combines this with measures of how significant each sector is to the wider economy and job market.

Which sectors are at highest risk?

Many of the risks are idiosyncratic, but a broad measure of the potential disruption faced by each sector can be calculated by looking at how reliant it is on trade with, and workers from, EU countries. Figure 18 shows the percentage of output that is exported to EU countries for nine areas of the economy7 and the percentage of workers within those industries who are citizens of other EU countries. The industries in the top right quadrant are those most dependent on EU workers and trade, and those in the bottom left quadrant are the least reliant. The size of the 'bubbles' shows the number of workers within each sector.

7 For industries for which this data is unavailable, such as agriculture, the figure was estimated by multiplying the percentage of output exported by the industry by the percentage of exports that go EU states across the whole economy.

Fig. 18: Exposure to Brexit risk



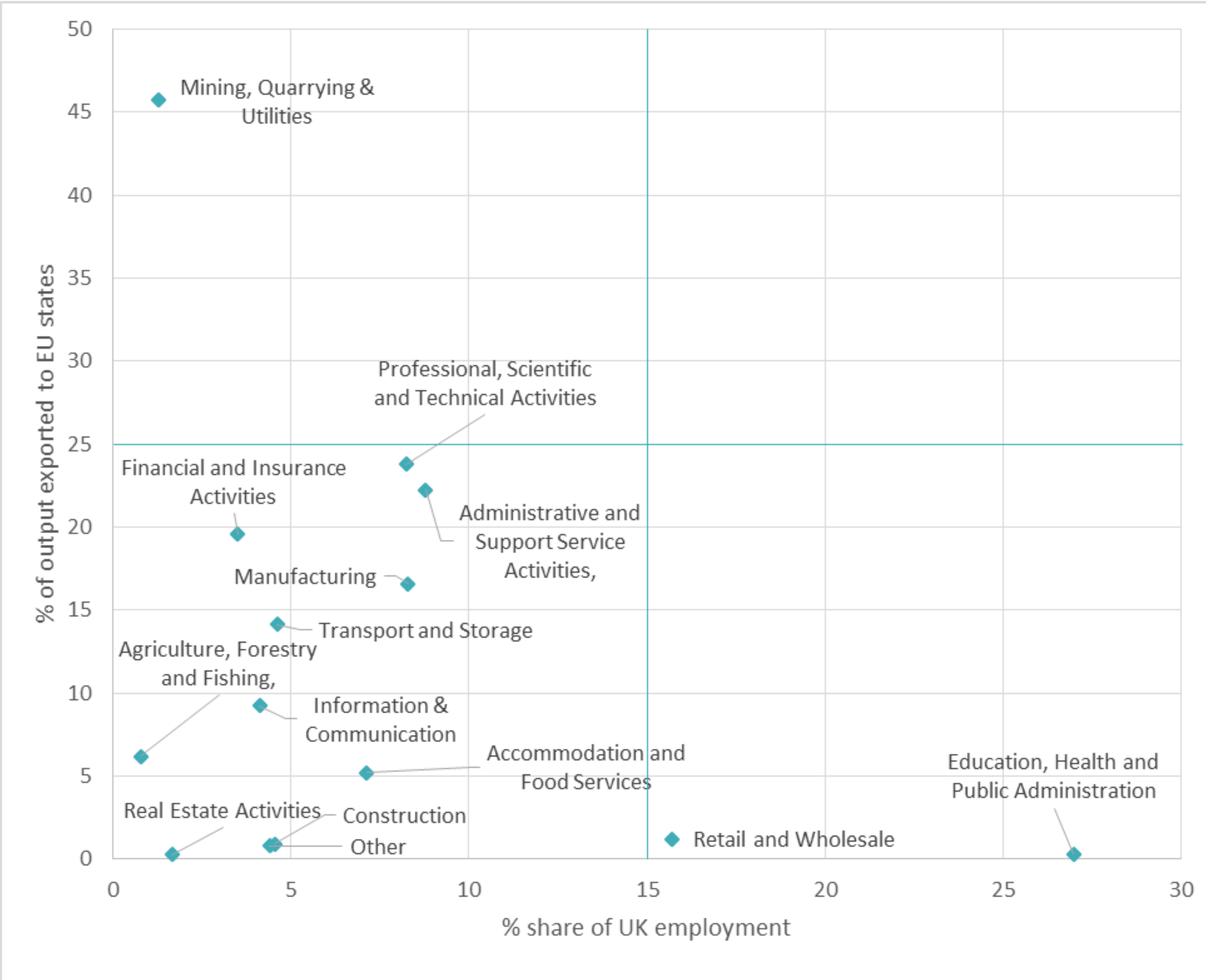
Source: ONS

Manufacturing is particularly vulnerable, as the sector second most reliant on trade with the EU (16.6%) and with the highest percentage of EU migrants in its workforce (10.9%). The finance sector also faces a high level of risk, with EU trade making up almost a quarter of its business and a significant number of EU citizens in its workforce. The transport sector also has relatively high levels of EU trade and EU workers, while agriculture is also highly exposed: the method used to estimate EU exports underplays its reliance on the single market (the National Farmers Union estimates 72% of all agricultural exports are to EU countries, while the average across the whole economy, used here to estimate EU exports, was 49.7%) and at present all of the sector's 36,000 foreign workers hail from EU countries.

How many jobs are at risk?

The good news is that the sectors that are the biggest employers in the UK are among the least reliant on EU trade (see fig. 19). The public and retail sectors, which between them employ almost 12.5 million people, rely mostly on domestic consumption. With 0.3% and 1.2% of output from these sectors exported elsewhere in the EU, fewer than 80,000 jobs are directly dependant on EU trade. Within these sectors there are some pockets, such as higher education, that face a particularly high risk, however. In 2014–15, one in five people registered at UK universities (437,000) were international students, supporting 206,600 full-time equivalent jobs on and off campus.[8] But more than one in three international students (36%) say the Brexit vote has made them less likely to study in the UK, which suggests as many as 75,000 jobs could be under threat across the wider economy as a result of falling numbers of international students alone.[9]

Fig. 19: Jobs v reliance on EU trade



Source: ONS

There are also several industries that have relatively high levels of both employment and direct reliance on EU trade. The professional, scientific and technical and business administration and support sectors employ almost 5 million people, for example, and rely on EU exports for more

---

[8] http://www.universitiesuk.ac.uk/policy-and-analysis/reports/Documents/2017/briefing-economic-impact-international-students.pdf

[9] https://publications.parliament.uk/pa/cm201617/cmselect/cmeduc/683/683.pdf

than a fifth of their demand. Manufacturing employs almost 2.5 million people and exports a sixth of its produce to other member states. This suggests that across these three industries alone more than 1.5 million jobs depend directly on EU trade (see figure 3). In total almost 2.5 million jobs rely on trade with the EU.

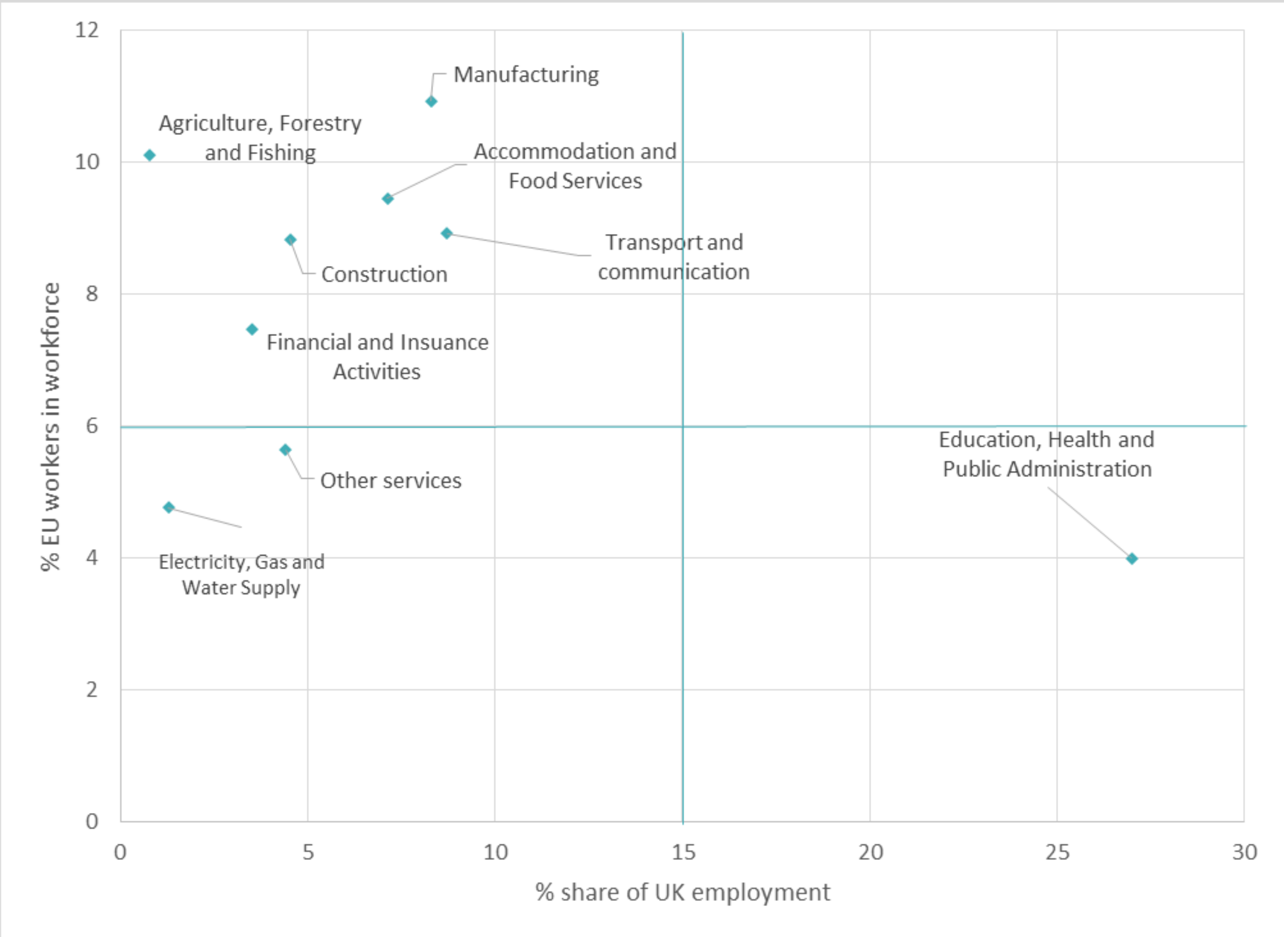
Fig 20: Jobs dependant on EU trade

Broad Industry Group	Total employees (000s)	% EU trade	Jobs directly dependant on EU trade (000s)
Professional, Scientific and Technical	2,409	23.8	573
Administrative and Support Service Activities	2,569	22.2	571
Manufacturing	2,425	16.6	402
Financial and Insurance Activities	1,027	19.5	201
Transport and Storage	1,348	14.1	191
Mining, Quarrying & Utilities	378	45.7	173
Information & Communication	1,205	9.2	111
Accommodation and Food Services	2,086	5.2	109
Retail and Wholesale	4,594	1.2	55
Education, Health and Public Administration	7,895	0.3	24
Agriculture, Forestry and Fishing	226	6.2	14
Construction	1,327	0.9	12
Other	1,289	0.8	10
Real Estate Activities	483	0.2	1
Total			2,447

Source: ONS

UK industries also face disruption from changes to, or uncertainty over, freedom of movement for workers. Both the Conservative and Labour parties have committed to ending free movement on leaving the UK, but it is unclear what system of migration will be introduced. Although there are two outliers in agriculture and the public sector, there is a general trend that the more people a sector employs in total, the greater its reliance on EU workers is likely to be (see Fig.21). The manufacturing, hospitality and transport sectors between them employ one in four workers and are among the most reliant on EU labour.

Fig 21: Jobs v reliance on EU workers

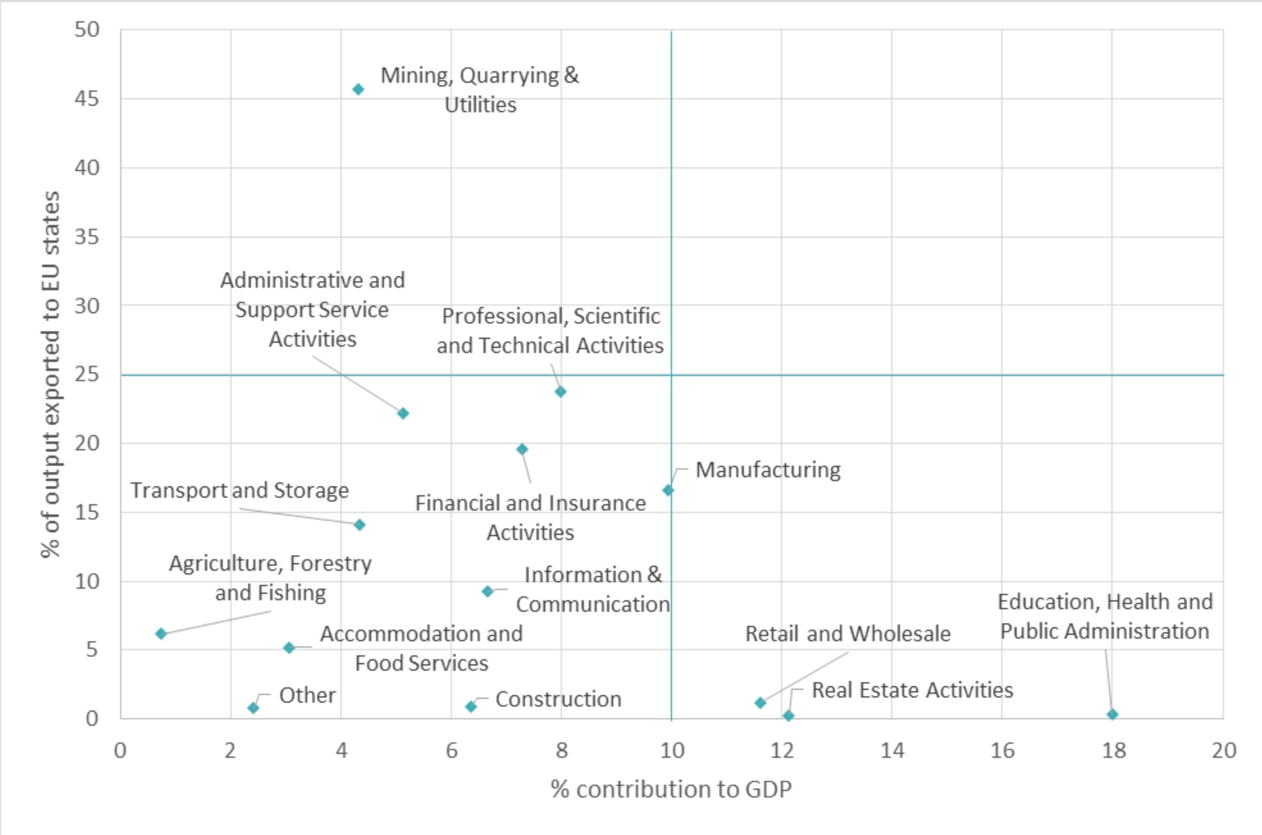


Source: ONS

How will GDP be affected?

The importance of domestic demand for the UK economy means that the sectors that contribute most to GDP are among the least reliant on exporting to other EU states (see fig. 23). The public sector, retail and real estate account for around 40% of GDP, but export just 1.2%, 0.3% and 0.2% of output respectively to EU states.

Fig. 23: Output v reliance on EU trade



Source: ONS

The areas of the economy with the greatest value of trade dependent on the EU are the professional, scientific and technical, manufacturing, financial and business support sectors, (see fig. 24). These four industries account for more than two-thirds of our trade within the single market, exporting more the £100bn of goods and service to other EU states each year.

Fig. 24: Value of EU trade by sector

Broad Industry Group	Output (£m)	% of output exported to EU states	Value of EU trade (£m)
Professional, Scientific & Technical	132,309	23.8	31,437
Manufacturing	164,750	16.6	27,297
Financial and Insurance Activities	120,627	19.5	23,581
Administrative and Support Service Activities	84,959	22.2	18,884

Mining, Quarrying & Utilities	30,022	45.7	13,723
Information & Communication	110,367	9.2	10,200
Transport and Storage	71,814	14.1	10,151
Accommodation and Food Services	50,810	5.2	2,647
Retail and Wholesale	192,335	1.2	2,327
Construction	105,402	0.9	952
Education, Health and Public Administration	298,010	0.3	923
Agriculture, Forestry & Fishing	12,355	6.2	765
Real Estate Activities	200,951	0.2	482
Other	40,072	0.8	320
Total			143,689

Source: ONS

Conclusion

In terms of threats to UK jobs and economic growth, four sectors stand out. Professional, scientific and technical, manufacturing, business administration and support, and the financial sector all combine a high level of exposure to Brexit risk with a significant contribution to the UK economy and employment levels. We estimate that approximately 1.75 million jobs in these four sectors alone rely on EU trade – more than two-thirds the total number of jobs supported by exports within the single market. These sectors also account for approximately two-thirds (£101bn) of estimated trade with EU states.

Section 4

How should government respond to these risks?

The uncertainty over the future of the UK's relationships with the European Union is already having an impact on workers' prospects. Economic growth has slowed, real wages are falling, we have low rates of investment, and a growing dependence on consumer debt.

Many of these trends were evident before the decision to leave the EU, and reflect the ongoing imposition of government austerity, and weak productivity growth. But the risks posed by Brexit to our future prosperity make the need for government to step in now to protect jobs and growth all the greater. We set out below what the government could do now and in the autumn budget to support workers' living standards now.

The report also highlights the risks posed to many jobs, and to growth more broadly, from a Brexit deal that limits our access to EU markets. We also set out the TUC's priorities for a Brexit deal that puts working people first.

Immediate action to support jobs, wages and growth

In the month after the referendum, the TUC called for a national action plan to protect workers' jobs and rights. We said that the government should:

- Increase infrastructure spending, in order to give business the confidence to invest, as well as providing vital upgrade to the British economy.
- Set out a modern industrial strategy, in consultation with unions and business.
- Make it clear that protecting workers' jobs and rights should be the priority in the Brexit negotiations, and prioritise protecting access to the single market.
- Seek to build a national consensus around immigration, guaranteeing the right of EU citizens to remain in the UK, and introducing a migration impact fund to help fund public services in the areas with highest immigration and highest pressure.
- Recognise the role Trade Unions have to play, with full consultation around the process of the negotiations.
- We also said that the Bank of England should ensure that monetary policy continues to support expansion in the economy.[10]

A year on, some of our objectives have been partially realised. The Bank of England has maintained interest rates at record lows – and we continue to believe that this is not the time for a rate rise. Government has consulted on an industrial strategy –with a White Paper

[10] https://www.tuc.org.uk/sites/default/files/Workingpeoplemustnotpaytheprice2.pdf

expected in ‘autumn’. There has been a nod towards infrastructure investment- although as we set out here, investment in this parliament is set to be lower than in the parliament before. And government has said that it aims to protect workers’ rights, though without setting out how it intends to do so.

Now is the time for Government to make good on these promises – and take additional action to boost wages, which have fallen further than expected in wake of the fall in the pound, and public services spending, where action is urgently needed, with workers and facilities stretched to the limit. The government should use the Budget to:

- Get serious about infrastructure investment. The OECD recommend that countries spend 3.5 per cent of GDP on infrastructure. Even if the full National Productivity and Infrastructure Spend is spent, the UK will be spending just 2.8 per cent.[11]
- Set out an industrial strategy that recognises how important worker voice is to raising productivity gains and growth.
- Tackle the exploitation of migrant workers which undercuts existing wage levels and conditions, for example by closing loopholes in the rules for temporary agency workers as recommended by the Taylor review as well as working with others to strengthen EU rules on posted workers.
- Direct more of the tax contribution migrant workers make to the communities that need extra resources for schools, hospitals and housing through a much-expanded migration impacts fund, as part of a general boost for spending on quality public services.
- Make it clear that the great repeal bill will include a cast iron guarantee that no workers’ rights that come from the EU will be diluted.

The TUC respects the decision taken in the referendum that the UK should leave the EU. Our priority now is to ensure that working people do not pay a price in terms of their jobs and livelihoods for the decision. As this report has set out, considerable numbers of jobs are at risk.

We believe that the within the negotiations:

- Unions should have a seat at the table when the future of work is negotiated, in order to ensure that working people’s rights are protected.
- Jobs, investments and livelihoods must be protected through tariff free, barrier free trade with Europe. That means government should seek a transitional period after leaving the EU in March 2019. During this period, the status quo should prevail. The UK should remain a member of the single market and customs union, as this is the best way to guarantee access to European markets, to ensure that workers are covered by EU workplace rights, and to prevent job-destroying disruption and uncertainty.
- We should keep all options on the table when it comes to the shape of our future trading relationship with the EU. The best way currently on offer to protect jobs, rights

[11] https://www.ft.com/content/c907081e-80c7-11e7-94e2-c5b903247afd

and livelihoods is to stay in the single market and customs union beyond the transitional period. While there may be alternatives, they must meet our tests of maintaining workers' rights and job preserving tariff- free, barrier free trade with the rest of Europe.