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REPORT

BOOSTING BRITAIN'S LOW-WAGE SECTORS

A STRATEGY FOR PRODUCTIVITY, INNOVATION AND GROWTH

Spencer Thompson, Catherine Colebrook, Izzy Hatfield and Patrick Doyle

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Institute for Public Policy Research

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SUMMARY

The UK has two related productivity problems. For many years, we have been less productive than our peers in Europe. Since the 2008/09 recession, we have added a second problem: our productivity growth – previously 2.3 per cent a year on average – has stalled.

The UK's low-wage sectors – defined for our purposes as including retail, accommodation, food and administrative services – contribute to both of these problems. They employ a third of all workers, and produce 23 per cent of the UK's gross value-added. But on average they are 29 per cent less productive than the economy as a whole.

The 'national living wage' (NLW), introduced in April, has a disproportionate impact on these sectors. In response to a higher wage bill we would ideally want firms to invest in productivity-enhancing technologies and training, or to review their business models to find more efficient ways of doing things. But there is already tentative evidence that some employers have instead chosen to seek out offsetting reductions in their labour costs, for example by reducing overtime pay.

Our analysis suggests that our low-wage sectors don't need to invent new ways of doing things: there is huge potential for UK firms to boost their productivity by adopting practices and technologies that already exist. But the fact that this hasn't happened to date, even though it would be in firms' interests to do so, suggests a need for public intervention. Our recommendations are intended to promote productivity-boosting actions on the part of low-wage firms.

KEY FINDINGS

- Since 2011 around half of the UK's productivity slowdown can be accounted for by shifts in the structure of the economy away from high-productivity sectors such as manufacturing, and towards those characterised by low productivity, such as accommodation and food.
- Our low-wage sectors are less productive than their equivalents in western Europe. New IPPR analysis suggests that if we were able to raise productivity levels among low-wage firms to the levels seen elsewhere, the UK could close a third of its average productivity gap with Belgium, France, Germany and the Netherlands.
- Workers in our low-wage sectors tend to be less qualified than their peers in Europe, while firms in the UK's low-wage sectors are less likely to offer training to their staff.
- Low-wage sector firms invest less in innovation than both other UK firms, and firms within the equivalent sectors in Europe. In particular, low-wage firms have not fully adopted the available information and communication technologies.

- The UK's low-wage sectors have an unusually high rate of business startups relative to other countries, but this does not translate into a higher proportion of high-growth businesses within those sectors.

FIGURE 1

On average the UK's low-wage sectors are 30 per cent less productive than Belgium, France, Germany and the Netherlands

Output (GVA) per hour worked in selected OECD countries, 2014 (index 100 = UK)

Source: IPPR calculations using Eurostat, 'National Accounts aggregates by industry', (Eurostat 2016a) and Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)

KEY RECOMMENDATIONS

The evidence suggests that firms are not investing in the adoption of new practices and technologies that would enable them to become more productive. There are two key reasons for this: first, low awareness on the part of firms of the benefits of productivity-boosting actions; and second, limited motivation (prior to the NLW) to act given relatively low labour costs.

The government should take the following measures to help improve low-wage sector firms' productivity.

To activate demand for productivity improvements, and rebalance innovation and growth spend

1. **Innovate UK should use its 'open programme' to expand its funding criteria to innovations in workplace organisation, job design, leadership and management** – drawing lessons from international experience, including Tekes, the Finnish Funding Agency for Technology and Innovation.
2. **Growth hubs should provide targeted advice and information to businesses in the low-wage sectors, and signpost Innovate**

UK's new 'open programme' to businesses in all sectors of the economy – growth hubs are being embedded in every local enterprise partnership area, giving local areas control over how they support small businesses to start and scale up.

3. **Local partners should be encouraged to include their plans to prioritise the performance of their low-wage firms when they bid into the Local Growth Fund** – these plans should be taken into account when evaluating bids.
4. **HMT and the FCA should consider aligning the financial reporting requirements for small co-ops with those for small companies**.
5. **BIS should equalise eligibility criteria to ensure that businesses using alternative models of ownership are able to access the government support on offer.**

To boost skill levels

6. **The government top-up to employers' digital apprenticeship service accounts should vary with the level of the apprenticeship: higher for level 4+, and lower for levels 2 and 3** – the variation could be designed such that the overall impact is cost-neutral, or the top-up for higher-level apprenticeships could be paid as a bonus.
7. **Businesses should establish degree apprenticeships for the biggest low-wage sectors, starting with wholesale and retail** – following the model recently developed for aerospace and other high-growth sectors.

1. INTRODUCTION

It is widely recognised that the UK economy has a productivity problem. This takes two forms. First, in the years following the financial crisis and subsequent recession, productivity growth, as measured by output per hour, has flatlined. Productivity is now 17 per cent lower than it would have been had the trend in the 25 years leading up to the 2008/09 recession continued. This is often called the productivity puzzle.

Second, there is a persistent productivity gap of 23 to 32 per cent between productivity levels in the UK and those in comparable economies such as Germany, France, the Netherlands and Belgium (Dolphin and Hatfield 2015). This is a longstanding problem that predates the financial crisis, but has continued in the years since.

Over the last parliament, jobs growth did much of the heavy lifting on economic growth. However, given that the working-age employment rate is at record levels and the unemployment rate has fallen to 5.1 per cent – its lowest level in over a decade – it is our performance on productivity that will underpin the economic resilience of the UK in the coming years. In addition, rising productivity is the central determinant of improving living standards in the medium and long-term, as well as driving differences in incomes between countries and ensuring healthy public finances for the provision of public services (HM Treasury 2015).

The chancellor has said many times that the UK must address its poor productivity. Indeed, the UK government has made productivity a key plank of its economic policy agenda, publishing in July 2015 its government-wide plan to promote productivity growth over this parliament, *Fixing the Foundations: creating a more prosperous nation* (ibid). Long-term projections for output per hour worked were downgraded at the March 2016 budget, meaning that the Office for Budget Responsibility (OBR) has revised GDP growth down by 0.3 percentage points a year for the rest of the decade. The chancellor is right to focus on the issue of productivity growth.

But both the public and policy debates on UK productivity have focused on sectors that are already highly productive, such as manufacturing and high-value business services. This paper instead focuses on sectors in the UK economy that are characterised by both low levels of productivity and low wages.[1] They are:

- agriculture, forestry and fishing
- wholesale and retail trade; repair of motor vehicles and motorcycles
- accommodation and food services
- administrative and support service activities
- arts, entertainment and recreation.

1 The sectors we analyse are those characterised by median hourly earnings lower than 80 per cent of the economy-wide median.

These ‘low-wage sectors’ are, we show, essential to the effort of improving UK productivity and living standards. Beyond their role in the productivity gap and the productivity puzzle, there are several other sound reasons why they should receive greater policy focus.

First, low-wage sectors generate a significant fiscal cost. Low-wage sectors account for 48 per cent of working tax credit expenditure, despite them employing only 26 per cent of the workforce (FRS 2013/14). Raising productivity and pay in these businesses could therefore contribute towards reducing the benefits bill and eliminating the deficit.

Second, the high prevalence of low-paid work in these sectors contributes to economy-wide measures of pay inequality. Workers in key low wage sectors such as hospitality, catering, retail and residential care are the most likely to be in working poverty (Cribb et al 2013). The 90/10 ratio, comparing the earning powers of those in the highest 10 per cent of earners (above the 90th percentile) with those in the bottom 10 per cent, would be reduced from 3.5 to 3.1 in the absence of low-wage sectors (ONS 2015). And, given that low-wage sectors employ a disproportionate number of women at low levels of pay, improving pay and productivity in the low-wage sectors would improve average pay for women.

Finally, and perhaps most pressing, is the impact of recent policy changes on low-wage sectors. Chief among these is the impact of the ‘national living wage’ (NLW), expected to rise to over £9 an hour by 2020. Analysis from the Resolution Foundation shows the impact of the NLW on the wage bills of different sectors across the economy (D’Arcy and Kelly 2015), with the low-wage sectors likely to see the greatest percentage increase in their wage bill. Through a combination of pay rises for those earning below the NLW and spillover effects to those at higher rates of pay, wage bills in low-wage sectors will have to rise by between 1.3 per cent (wholesale and retail) to 3.4 per cent (hotels and catering) by 2020 – far higher than the expected economy-wide increase of 0.6 per cent (D’Arcy and Corlett 2015).

There are a number of ways in which low-wage sectors might deal with the cost pressures driven by the NLW. By far the most benign outcome would be an increase in productivity in these sectors, leading to a virtuous cycle of higher pay, higher productivity and higher economic growth. While the OBR does not expect the introduction of the NLW to lead to sizeable job losses, it is far from certain that low-wage sector businesses will be able to deliver the productivity growth required to fully absorb the higher wage floor –survey evidence suggests that only 30 per cent of businesses will manage higher costs in year one of the NLW through efficiency and productivity (ibid). If significant numbers of businesses choose instead to deliver the NLW through higher prices, reductions in non-wage benefits or training, or reduced profits, while we will still see a welcome increase in the incomes of some of the lowest-paid in society, this may not be sustainable over the long-term.

Other upcoming policies are also likely to impact on running costs in low-wage sectors. The introduction of the apprenticeship levy – a tax of 0.5 per cent on businesses with pay bills higher than £3 million pounds – will impact large retailers and hotel chains and will be implemented from

April 2017. Temporary tax reliefs for small firms, such as the employment allowance (a reduction in NICs payable that has a greater impact on small firms) may be coming to an end, exerting further cost pressures on low-wage sectors in particular. At the same time, however, other policies, such as the extension of the now-permanent business rate relief provision for small businesses, and further cuts to the headline rate of corporation tax, will reduce business costs.

This paper explores the productivity problem in low-wage sectors, its contribution to the productivity gap and productivity puzzle, the drivers of low productivity in these businesses, and the strategies that businesses can pursue to raise both pay and productivity. It then goes on to set out several priorities for policymakers in promoting productivity growth in low-wage sectors, and offers recommendations that actors in central and local government should adopt to facilitate productivity improvements in these parts of the economy.

2.
THE ROLE OF LOW-WAGE SECTORS IN THE UK'S PRODUCTIVITY PROBLEM

Eleven million people work in low-wage sectors in the UK, accounting for more than a third of UK jobs (ONS 2016[2]). We have defined these sectors – dominated by the retail and administrative and support service industries – as those with median hourly wages less than 80 per cent of the UK's median hourly wage. Given their size – together they account for 23 per cent of UK gross value added (Eurostat 2016a[3]) – these sectors contribute to both the UK's poor productivity performance since the recession, and our productivity gap with other countries.

TABLE 2.1

Low-wage sectors GVA share and employment share, 2014

	Share of GVA (%)	Share of employment (% hours)
Low-wage sectors	**23%**	**33%**
Of which...		
Wholesale and retail trade; repair of motor vehicles and motorcycles	12%	15%
Administrative and support service activities	5%	8%
Accommodation and food service activities	3%	6%
Arts, entertainment and recreation	2%	2%
Agriculture, forestry and fishing	1%	2%

Source: IPPR calculations using Eurostat, 'National Accounts aggregates by industry', (Eurostat 2016a) and Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)

Wages and productivity are strongly linked. As such it is no surprise that the UK's low-wage sectors are less productive than more high-pay sectors such as finance and manufacturing. Figure 2.1 shows productivity levels in the low-wage sectors relative to the average level in the economy. All of the low-wage sectors have lower levels of output per hour than the UK average. Productivity in the accommodation and food services sector, for example, is more than 40 per cent lower than in the economy as a whole. On average the low-wage sectors are 29 per cent less productive than the economy as a whole.

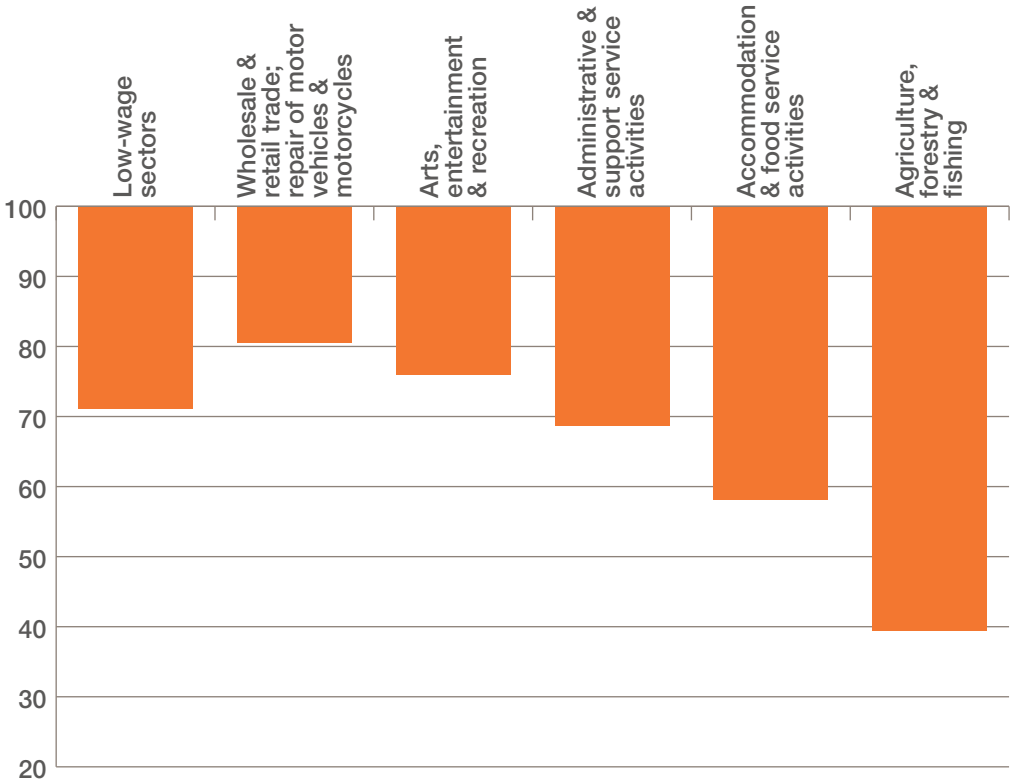
2 ONS data refers to December 2015.

3 Eurostat data refers to 2014.

FIGURE 2.1

Productivity in the low-wage sectors lags far behind the rest of the UK economy

Productivity (GVA per hour worked) in the low-wage sectors relative to all sectors (index 100 = all sectors), 2014



Source: IPPR calculations using Eurostat, 'National Accounts aggregates by industry', (Eurostat 2016a) and Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)
Notes: Unless otherwise stated, in IPPR calculations 'all sectors' refers to sectors A–S as classified by UK Standard Industrial Classification of Economic Activities 2007, excluding L (Real Estate Activities). Unless otherwise noted, sectoral productivity is measured as GVA per hour worked.

2.1 LOW-WAGE SECTORS AND THE PRODUCTIVITY PUZZLE

Between the first quarter of 1998 and the eve of the recession in the first quarter of 2008, productivity growth in the UK economy, as measured by output per hour worked, averaged 2.3 per cent a year. This masks large differences between individual sectors over that period, with some – such as manufacturing, business services, finance, and information and communication – outperforming the economy as a whole by some margin, and construction and mining productivity either growing weakly or falling. Productivity in the low-wage sectors, however, tended to grow in line with economy-wide productivity.

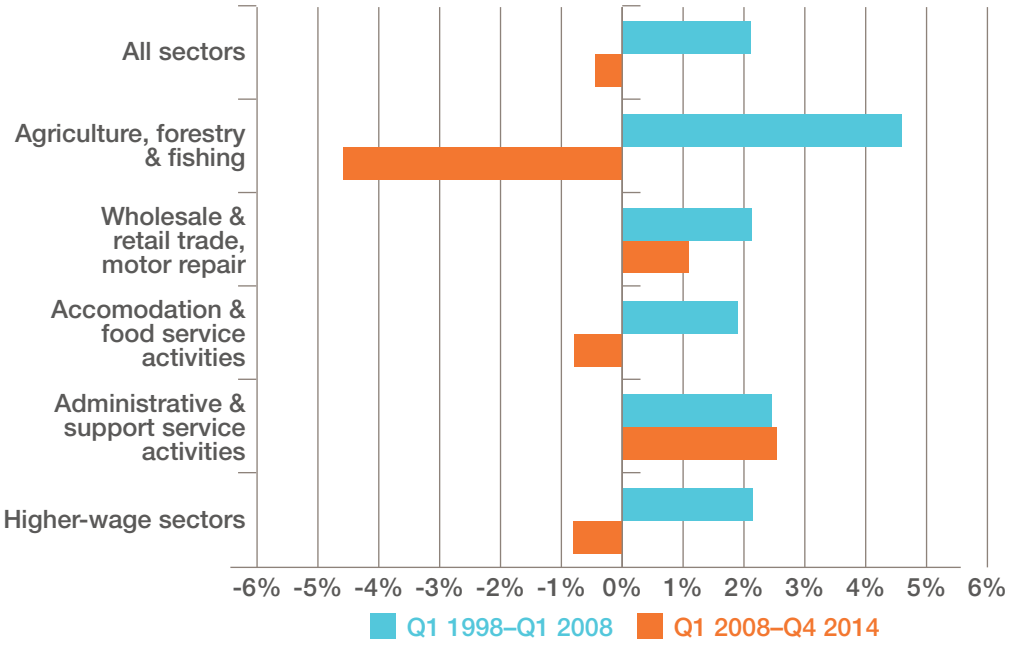
Since the recession, UK productivity has fallen by 0.5 per cent a year on average. While this reflects a broad-based deterioration in productivity performance, a couple of the low-wage sectors have bucked the trend: retail and wholesale sector productivity growth, while slower than in the pre-recession period, was nonetheless positive at 1.3 per cent between

2008 and early 2014, while productivity growth in administration and support services in fact strengthened slightly (see figure 2.2).

FIGURE 2.2

Some low-wage sectors have bucked the trend of deteriorating productivity

Average annual productivity growth by sector, Q1 1998–Q1 2008 and Q1 2008–Q4 2014



Source: IPPR calculations using Eurostat, 'National Accounts aggregates by industry', (Eurostat 2016a) and Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)

Changes in the aggregate level of productivity come both from differences in the rate of productivity growth within sectors, and the distribution of economic activity across sectors. If a relatively low-productivity sector becomes larger, it can act as a drag on overall productivity growth. In particular, during the period from 2012 to 2014, approximately half of the fall in productivity in the UK was due to shifts in the structure of the economy, with growth in jobs and hours worked disproportionately found in low-wage sectors, which happened alongside a fall in the proportion of workers in high-productivity sectors (Dolphin and Hatfield 2015). Despite the fact that productivity growth has held up relatively well in low-wage sectors post-crisis, they have nevertheless played a role in the UK's recent overall productivity decline.

2.2 LOW-WAGE SECTORS AND THE PRODUCTIVITY GAP

Overall the UK's productivity performance is weak compared with international competitors. Previous research (ibid) shows that the UK ranks 18th out of 34 OECD countries in terms of GDP per hour worked. In comparison with other western European countries, UK GDP per hour worked ranks 15th out of 17 countries. Productivity in four of these

countries with the most comparable economies – Belgium, France, Germany and the Netherlands – is between 17 and 34 per cent higher than the UK (see figure 2.3).

The UK's productivity shortfall in comparison with our European competitors indicates that there is scope for the UK to become more productive. Dolphin and Hatfield (2015) show that the UK's productivity gap with seven western European countries including Belgium, France, Germany and the Netherlands is due to lower productivity within sectors rather than to the industrial composition of the UK economy. It's interesting to note that the UK underperforms in *all* of the broad sectors of its economy. This suggests that the low-wage sectors, as well as more productive sectors like manufacturing, are contributing to the UK's productivity gap.

FIGURE 2.3

The productivity gap between the UK and other countries is greatest in the low-wage sectors

Productivity in selected OECD countries, 2014 (index 100 = UK)

Source: IPPR calculations using Eurostat, 'National Accounts aggregates by industry', (Eurostat 2016a) and Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)
Notes: Productivity (GVA per hour worked) is calculated using the most recent GVA and employment (hours) data from Eurostat. There is a significant amount of missing data on employment (hours) in France for the most recent year of data (2014). In order to estimate the number of hours worked in each sector of the French economy in 2014 we have applied the proportion of hours worked in France in 2013 to the total number of hours worked in France in 2014. We have used this methodology throughout this paper. The average between countries is calculated as a weighted average.[4]

Using GVA and employment data from Eurostat, we are able to analyse the contribution of the UK's low-wage sectors to the UK's relative productivity weakness. The productivity differentials as measured by

4 Measuring differences in productivity between countries is challenging, differences in prices between countries may, for example, be picked up in GVA data. If a good or service is simply more valued in a different country then this would translate into higher output per hour.

the Eurostat data differ in size to those often reported because they use GVA rather than GDP as a measure of output, yet the pattern of weak UK productivity remains the same. Taking a simple average between the countries, the UK's productivity gap with these countries is 22 per cent.

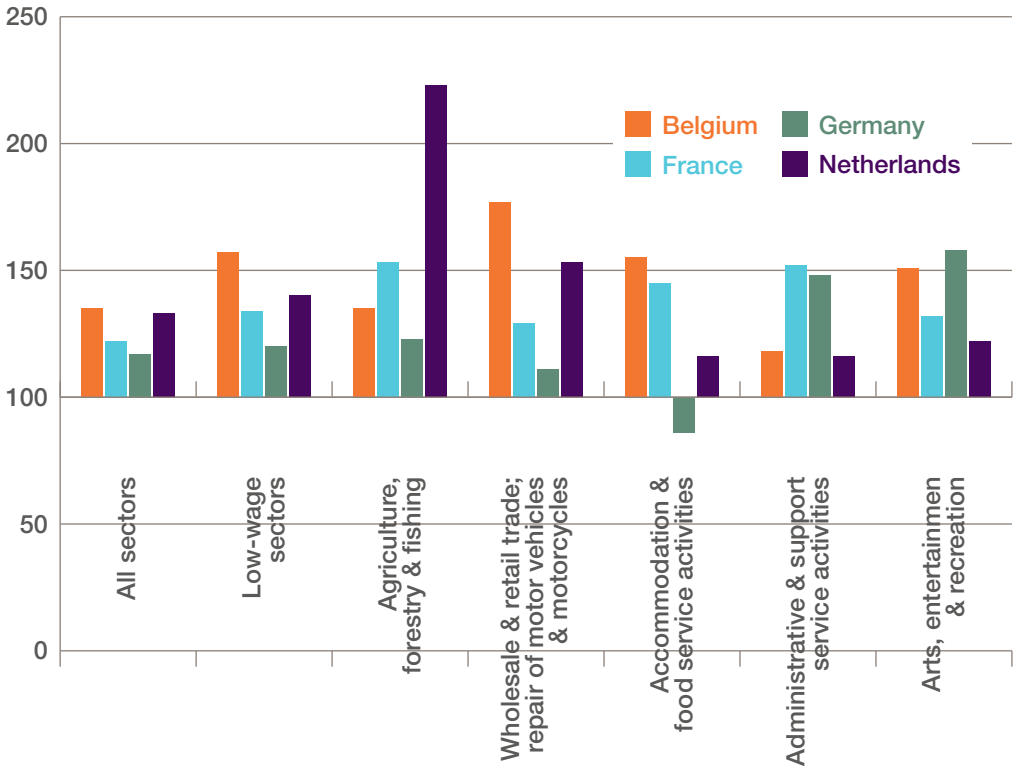
If we isolate the low-wage sectors from the rest of the economy we can see that the UK is between 20 and 57 per cent less productive in these sectors than the four other countries. The average gap is 30 per cent, compared to just 18 per cent in the higher-wage sectors. When we look at each of the low-wage sectors individually we see that this pattern is replicated across all of the low-wage sectors.

Figure 2.4 shows that the UK has the lowest GVA per hour worked in all low-wage sectors except accommodation and food services, where the UK ranks fourth out of the five countries shown (Germany has lower productivity in this sector). While it is not surprising the UK's low-wage sectors have lower productivity than the UK's higher-wage businesses, it is notable that the UK's low-wage sectors are largely much less productive than the same sectors in Belgium, France, Germany and the Netherlands.

FIGURE 2.4

The low-wage sectors in the UK are less productive than in other comparable countries

GVA per hour (euros) in selected OECD countries in the low-wage sectors, 2014 (index 100 = UK)



Source: IPPR calculations using Eurostat, 'National Accounts aggregates by industry', (Eurostat 2016a) and Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)

Statistically the UK's productivity shortfall with other countries can be broken down into three effects.[5]

1. The **structural effect** captures the part of the productivity gap that results from differences in the structural composition of the economy. In the UK, for example, a smaller share of employment happens in the manufacturing sector than in Germany – as manufacturing is very productive this structural difference contributes a significant amount to the UK's productivity gap with Germany.
2. The **within-sector effect** measures the differences in productivity between countries in the absence of any structural difference in the composition of the economy. The German manufacturing sector is more productive than the UK's manufacturing sector – assuming the employment share of manufacturing in Germany was the same as in the UK, some of the productivity gap is accounted for by higher productivity within the German manufacturing sector.
3. The **cross effect** is a residual term which measures the interaction between the structural and within-sector effects, and can be thought of as a measure of the 'spillover effect' of both productivity measures. If the structural and within-sector effects are operating in the same direction (that is, both positive or both negative) then the cross effect will be positive; if they are operating in opposite directions then the cross effect will be negative. A small part of the UK's productivity gap with Germany is accounted for by the positive spillover generated by the interaction of the positive structural and within-sector effects.

We have analysed these three effects and their contribution to the UK's productivity gap with Belgium, France, Germany and the Netherlands. The results show that the aggregate structural effect contributing to the UK's productivity gap with these countries is very small, or even negative. In the case of France, almost none of the 22 per cent productivity gap with the UK is accounted for by the structural effect. This means that if the UK were to change the structure of its economy to match France's, there would not be a boost in productivity as a result.

However, the within effect – the fact that the UK's sectors are less productive than the same sectors in France – is a very important contributor to the productivity gap versus France. Higher productivity within the French higher-wage sectors accounts for 14 percentage points of the UK productivity gap with France; however, lower productivity within the low-wage sectors makes a sizeable contribution too. Four percentage points of the gap is accounted for by lower productivity in the wholesale and retail trade sector, and three percentage points by the administrative and support services.

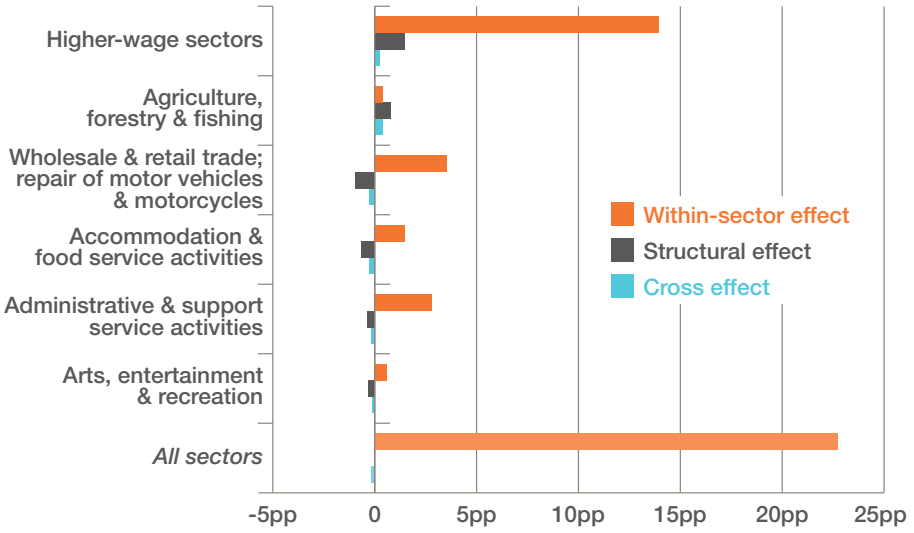
Figure 2.5 and the accompanying box show the role that each of the UK's low-wage sectors plays in our productivity shortfall versus France.

5 This type of decomposition (or shift-share analysis) is common practice. See for example Sepp and Varblane (2014), who use it to assess the productivity gap between Korea and Estonia.

FIGURE 2.5

The structure of the economy does not explain the UK's productivity gap with France

Contribution of low-wage sectors to the UK's productivity gap with France (percentage points), 2014



Source: IPPR calculations using Eurostat, 'National Accounts aggregates by industry', (Eurostat 2016a) and Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)
Notes: We conducted the same shift-share analysis for the UK productivity gap with Belgium, Germany and the Netherlands. The results for these countries are in the appendix.

Within-sector effects

Ignoring structural differences between the economies of the UK and France, higher-wage sectors in France are 14 per cent more productive than the higher-wage sectors in the UK.

Positive within-sector effects for each of the low-wage sectors means that higher productivity in the low-wage sectors in France is also an important driver of the productivity gap. These effects are biggest in wholesale and retail trade and administrative and support services.

Structural effects

France's low-wage sectors employ a smaller share of the workforce than their equivalents in the UK, with the exception of agriculture, forestry and fishing. A higher share of hours is worked in the French higher-wage sectors than in the UK.

Ignoring productivity differences between the two countries, these structural effects net out at almost zero. The slight negative effect means that the UK's composition in terms of hours worked is actually slightly more favourable than the breakdown in France.

Cross effects

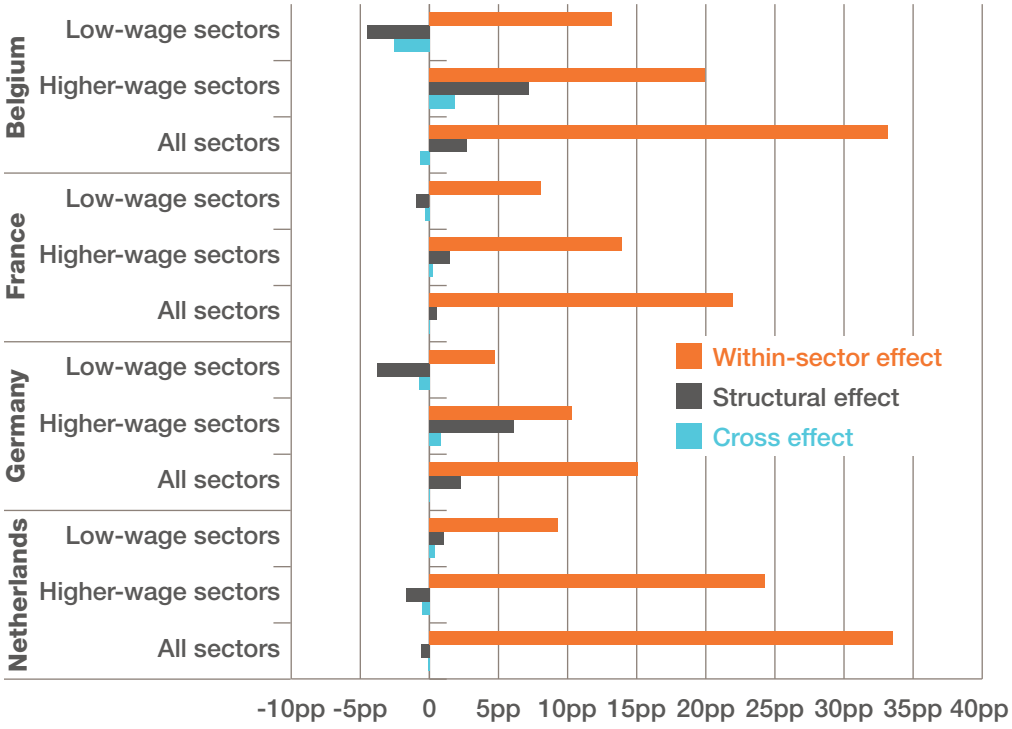
The cross effect is dependent on the interaction between the within-sector effect and the structural effect, so in the case of the higher-wage sectors higher productivity (represented by the positive within-sector effect) and a larger share of hours creates a positive spillover.

Aggregating the low-wage sectors up to one large group allows us to show how these effects contribute to the UK's productivity gap with the four countries (see figure 2.6). The analysis indicates that within-sector effects are a far greater contributor to the UK's relative productivity weakness than structural effects. This holds true in the low-wage sectors as well as in higher-wage sectors.

FIGURE 2.6

The biggest contribution to the UK's international productivity gaps is lower productivity within sectors

Contributions to the productivity gap by effect and low-wage or higher-wage sector, with selected European countries, 2014



Source: IPPR calculations using Eurostat, 'National Accounts aggregates by industry', (Eurostat 2016a) and Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)
Notes: The category 'All sectors' is calculated as the sum of the within-sector and structural effects, meaning that the cross effect for this grouping is not always positive when the within-sector and structural effects are either positive or negative. The 'All sector' effects sum to the UK's productivity gap with each country.

Within-sector effects

In Belgium, France, Germany and the Netherlands the within sector effects are the dominant driver of the productivity gap with the UK. This holds true in the higher-wage sectors and the low-wage sectors.

Structural effects

The strongest structural effects are seen in Belgium and Germany. In both cases a significantly greater proportion of hours are worked in the higher-wage sectors than in the UK (more than five percentage points). Ignoring productivity differences between these countries, the pure

structural effect of having more labour in higher-productivity sectors nets to mean that their economy is more favourably structured.

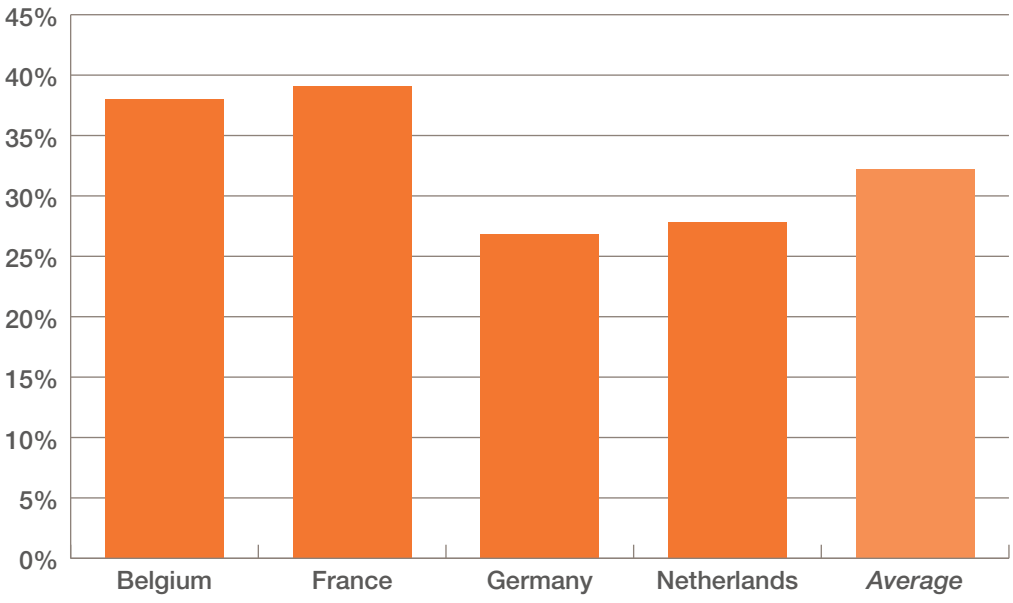
The Netherlands has more people working in low-wage sectors and fewer working in higher-wage sectors creating a small negative structural effect.

Our analysis confirms that the low-wage sectors are an important contributor to the UK's productivity gap with the four European countries considered. In fact, if the UK's low-wage sectors were as productive as the same sectors in Germany, France, Belgium and the Netherlands, the UK could close between 27 and 39 per cent of its productivity gap with these countries (see figure 2.7). If productivity in the low-wage sectors were to rise to the weighted average across these four countries then the UK could reduce by almost a third (32 per cent) the UK's average productivity gap with them. This underscores the importance of the low-wage sectors to our overall productivity gap with our western European neighbours.

FIGURE 2.7

If productivity in the low-wage sectors were to rise to the average across comparator countries then the UK could reduce its productivity gap with them by almost a third

The proportion of the UK's productivity gap with each country that could be closed if the UK's low-wage sectors were as productive as theirs



Source: IPPR calculations using Eurostat, 'National Accounts aggregates by industry', (Eurostat 2016a) and Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)

2.3 CONCLUSIONS

Low-wage sectors are central to the UK economy, as well as the UK's productivity puzzle and its productivity gap. Over recent years, a shift in the structure of the economy away from higher-value services and

production sectors towards low-wage sectors has accounted for around half of the UK's weak productivity performance post-recession. If this structural shift persists, or intensifies, it will only increase the importance of low-wage sectors to overall UK productivity.

Low-wage sectors are also an important part of the UK's poor productivity levels compared to our international competitors, accounting for almost a third of our productivity gap with Belgium, France, Germany and the Netherlands. While concerning, this does at least suggest that there is substantial scope for 'catching-up' in productivity terms with the top performers internationally.

3. UNDERSTANDING PRODUCTIVITY GROWTH IN LOW-WAGE SECTORS

3.1 PRODUCTIVITY CATCH-UP IN LOW-WAGE SECTORS

The previous section provides grounds for optimism: there is great potential for the UK's low-wage sectors to become more productive by adopting processes, practices and technologies that already exist. The consensus view is that it is much easier to become more productive by 'catching up' – adopting existing best practice used elsewhere – than by 'pushing the frontier', and innovating beyond existing best practice (Khan 2006, Griffith et al 2002).

Rather than requiring radical new innovations that push the technological frontier, catching up requires the diffusion and adoption of industry or economy-leading innovations and practices. A recent study by the McKinsey Global Institute identified potential annual productivity growth of 2 per cent in developed economies, and of this, 55 per cent would come from catching up (Manyika et al 2015).

In the context of the UK's low-wage sectors, which are less productive than both their counterparts in other European countries and other sectors within the UK, we would expect the scope for productivity catch-up to be high. Some economists and commentators, such as Robert Gordon, are sceptical about the prospects for productivity growth at a global level, believing the productivity frontier is unlikely to expand significantly in the 21st century (Gordon 2012). Whether Gordon is correct or not is very important for the global economy, but is less of an issue when considering the UK's low-wage sectors. We know that the UK's low-wage sectors display much lower productivity than those same sectors internationally, which means that a good deal of productivity growth can occur through the diffusion and adoption of innovations and best practices that already exist.

Among low-wage sectors, there is limited evidence of productivity catch-up in the decades leading up to the financial crisis. For example, between 1970 and 2009 real productivity growth in the retail and wholesale sector averaged 1.5 per cent per annum – higher than in Belgium, which averaged 1.3 per cent, but lower than in France, Germany and the Netherlands, each of which averaged 2.7 per cent annual productivity growth.

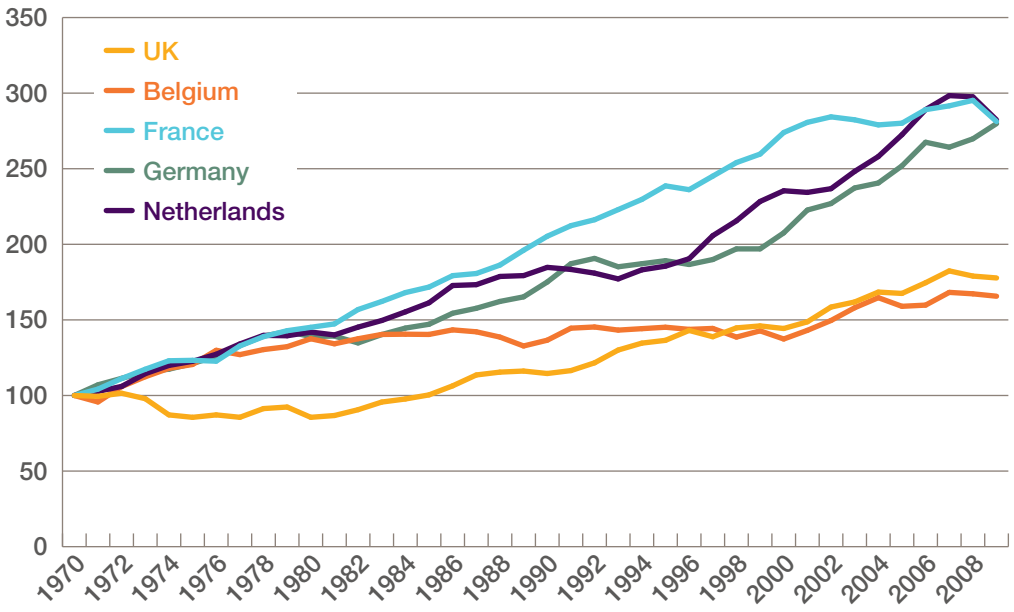
These persistent differentials meant that, over the period as a whole, while the UK retail and wholesale sector saw productivity growth of

close to 80 per cent, the same sectors in France, Germany and the Netherlands experienced productivity growth of more than 180 per cent.[6]

FIGURE 3.1

The UK has seen much poorer productivity growth in the retail and wholesale sector than France, Germany and the Netherlands

Real productivity growth in retail and wholesale, 1970–2009 (index 100 = 1970)



Source: IPPR calculations using O'Mahony et al, 'Output, Input and Productivity Measures at the Industry Level' (O'Mahony et al 2009)

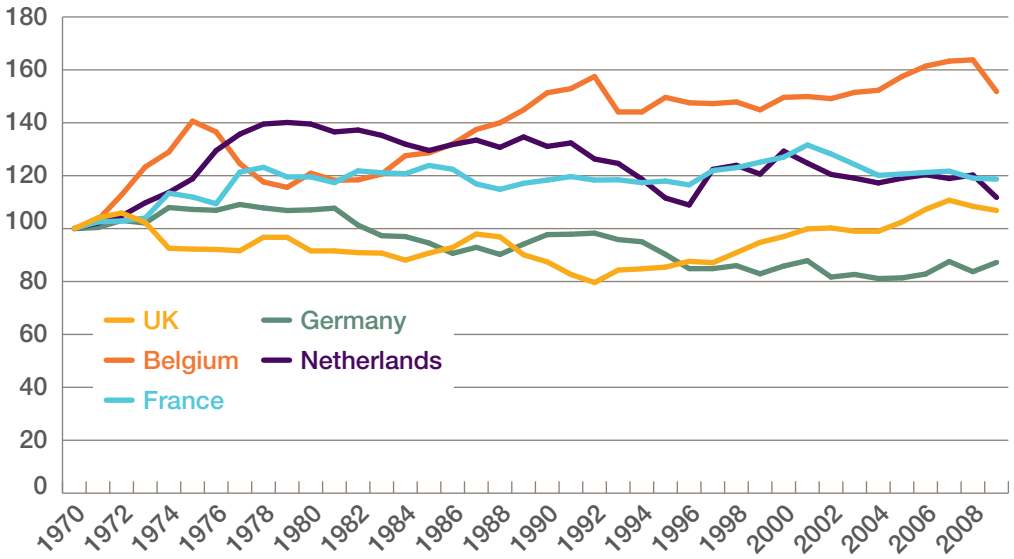
This picture varies across low-wage sectors. In accommodation and food, for example (see figure 3.2), average annual productivity growth has been much slower in both the UK and comparator countries, and was in fact negative in Germany, meaning that real productivity was lower in 2009 than it was in 1970. Nevertheless, the UK still showed lower annual average productivity growth rates in the sector (at 0.2 per cent per year) than in Belgium (1.1 per cent), France (0.4 per cent) and the Netherlands (0.3 per cent).

6 This data takes account of growth in sector-level prices. Data for the agriculture and for the arts, entertainment and recreation sectors available upon request.

FIGURE 3.2

Productivity growth in the accommodation and food sectors has been moderate in both the UK and comparator countries

Real productivity growth in accommodation and food, 1970–2009 (index 100 = 1970)



Source: IPPR calculations using O'Mahony et al, 'Output, Input and Productivity Measures at the Industry Level' (O'Mahony et al 2009)

Focusing just on the 10 years leading up to the eve of the financial crisis in 2007, the UK's performance in the two above sectors improved, with average annual productivity growth in retail and wholesale of 2.8 per cent and in accommodation and food of 2.4 per cent. This meant that retail and wholesale productivity rose faster than in Belgium and France, and faster than all four comparator countries in accommodation and food, providing some evidence of catch-up.

But even if the UK were to start catching up again in the manner that it did between 1998 and 2007, it would take decades for productivity levels in these UK sectors to reach the levels seen elsewhere. Figure 3.3 shows the productivity ratio of other countries' retail and wholesale sectors to those same sectors in the UK between 2014 and 2030, assuming average annual rates of real productivity growth from 1998 to 2007 held. While the productivity gap with France would be virtually closed by 2030, productivity levels in the Belgian retail and wholesale sectors would still be around 50 per cent higher than the UK, and the gap with Germany and the Netherlands would be wider.

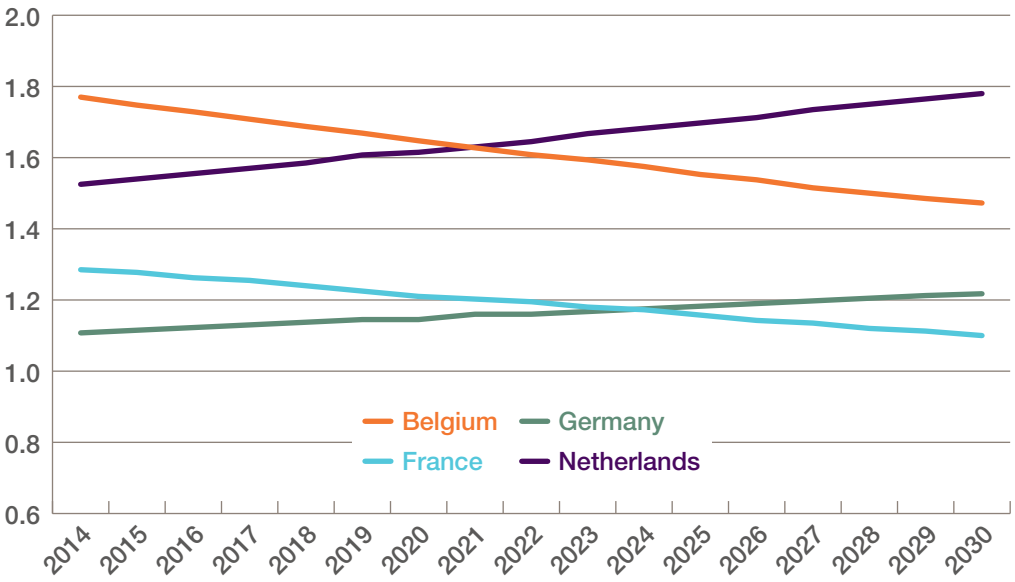
Repeating this analysis for the accommodation and food sector shows that, versus all countries except Germany, the productivity gap would either remain constant or grow under 1998–2007 average rates of productivity growth.

Together, this suggests that a return to business as usual productivity growth in low-wage sectors will not be enough to close the productivity gap over the medium-term. In order to close the sector gaps completely by 2030, productivity growth in the UK retail and wholesale sector would need to average 6.6 per cent a year (more than double the average between 1998 and 2007), and in accommodation and food 4.8 per cent a year (double the average between 1998 and 2007).

FIGURE 3.3

A return to business as usual productivity growth in low-wage sectors will not be enough to close the productivity gap over the medium term

Projected productivity ratio in retail and wholesale between the UK and comparator countries, assuming 1998–2007 productivity growth differentials

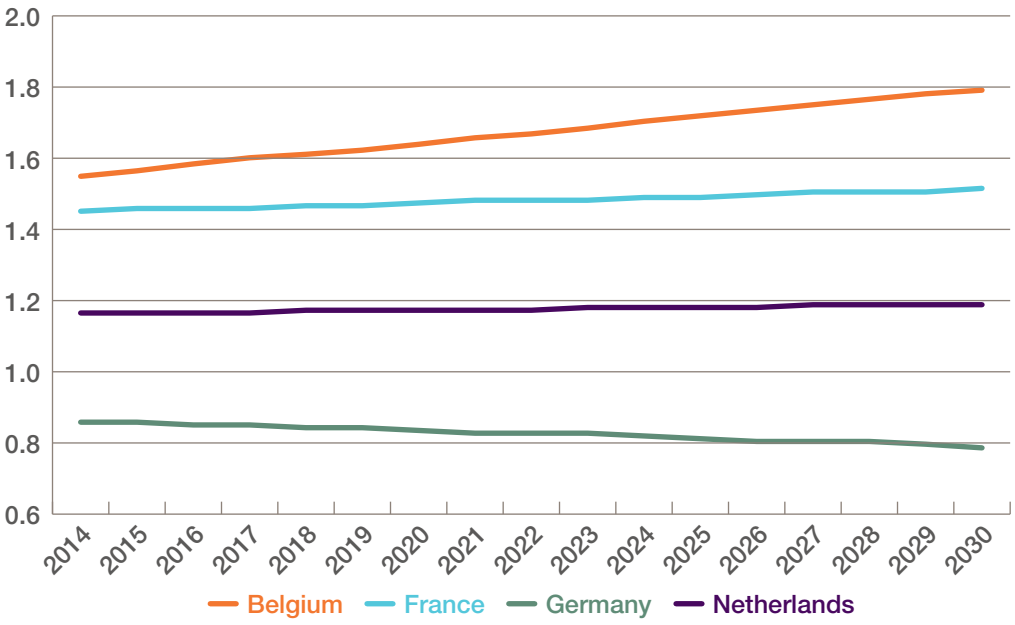


Source: IPPR calculations using O'Mahony et al, 'Output, Input and Productivity Measures at the Industry Level' (O'Mahony et al 2009) and Eurostat, 'National Accounts aggregates by industry', (Eurostat 2016a) and Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)

FIGURE 3.4

Against all countries other than Germany, the UK's productivity gap in accommodation and retail would either remain constant or grow

Projected productivity ratio in accommodation and food between the UK and comparator countries, assuming 1983–2008 productivity growth differentials



Source: IPPR calculations using O'Mahony et al, 'Output, Input and Productivity Measures at the Industry Level' (O'Mahony et al 2009) and Eurostat (2015)

3.2 THE DRIVERS OF PRODUCTIVITY GROWTH IN LOW-WAGE SECTORS

Competition and enterprise

Why, despite the persistent gap between the UK's low-wage sectors and those same sectors internationally, might catch-up and convergence between productivity levels not take place?

In general, competition is a driver of productivity, and the more competitors a firm has, the more productive it has to be to stay in business. Those sectors whose output is more easily tradable, such as manufacturing, tend to have very similar levels of productivity across countries. This is because international competition causes most price differentials across countries to disappear, with firms that cannot produce output at the prevailing international price less likely to survive (OECD 2015). Trade enhances productivity in other ways, including through transfer of international knowledge and best practice between firms, as well as between customers and suppliers, and through the potential it creates for greater market size and higher profits, both of which have productivity-enhancing side effects (ibid).

Trade between regions within countries can also have a positive effect on productivity. Industries that cluster in particular regions and sell to markets beyond their local area experience much more of a productivity

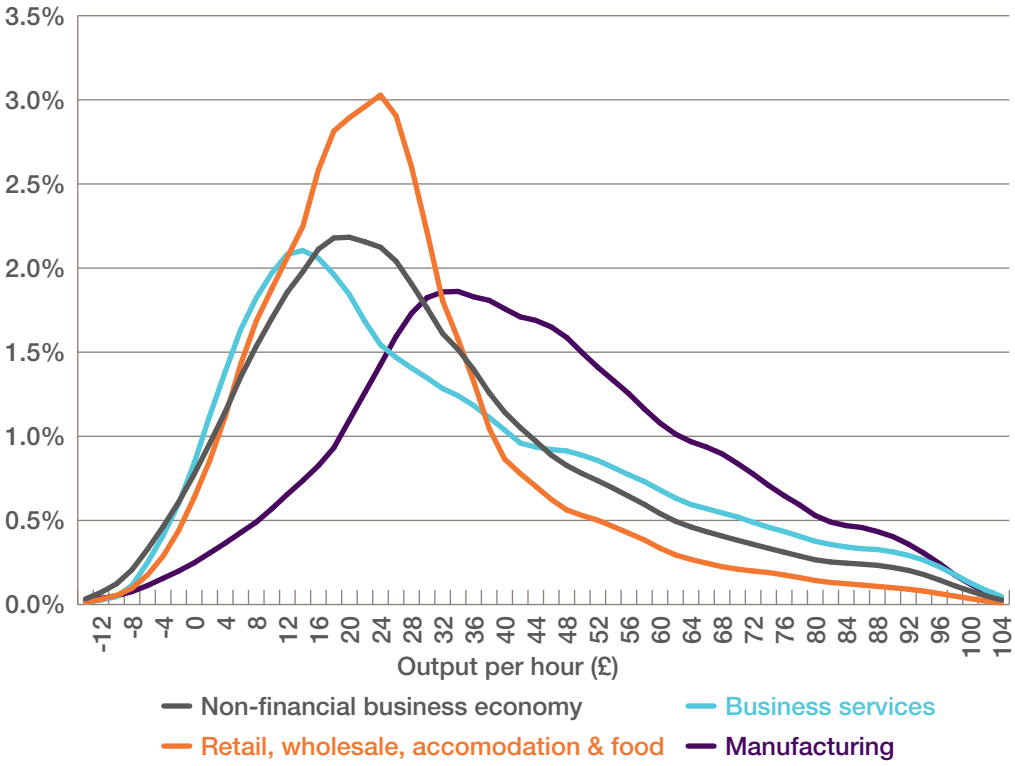
boost than those that do not tend to 'export' to other regions, a grouping likely to include most of the low-wage sectors (Martin et al 2015). It is therefore possible for firms within a given untradeable sector to have drastically different productivity levels, and likely that untradeable sectors will tend to have lower productivity overall. Many businesses in low-wage sectors – small retailers or sole traders for example – are anchored in their local community and face fewer competitive pressures from the regional and global economy than businesses in highly tradeable sectors such as manufacturing.

Based on recent data on the distribution of firm productivity, it is clear that the low-wage sectors, defined as retail, wholesale, accommodation and food, have a greater proportion of low-productivity businesses than either the economy as a whole, or other key sectors such as manufacturing and business services. Using average UK productivity in 2014 of £34 per hour, 37 per cent of firms in low-wage sectors have lower than the economy-wide average productivity, versus 31 per cent in the non-financial economy as a whole, 29 per cent in the business services sector, and only 17 per cent in UK manufacturing (figure 3.5).

FIGURE 3.5

Firms in the low-wage sectors are concentrated at the lower end of the productivity distribution

Productivity distribution of firms in selected UK sectors (2014)



Source: ONS, 'Annual Business Survey' (ONS 2014)

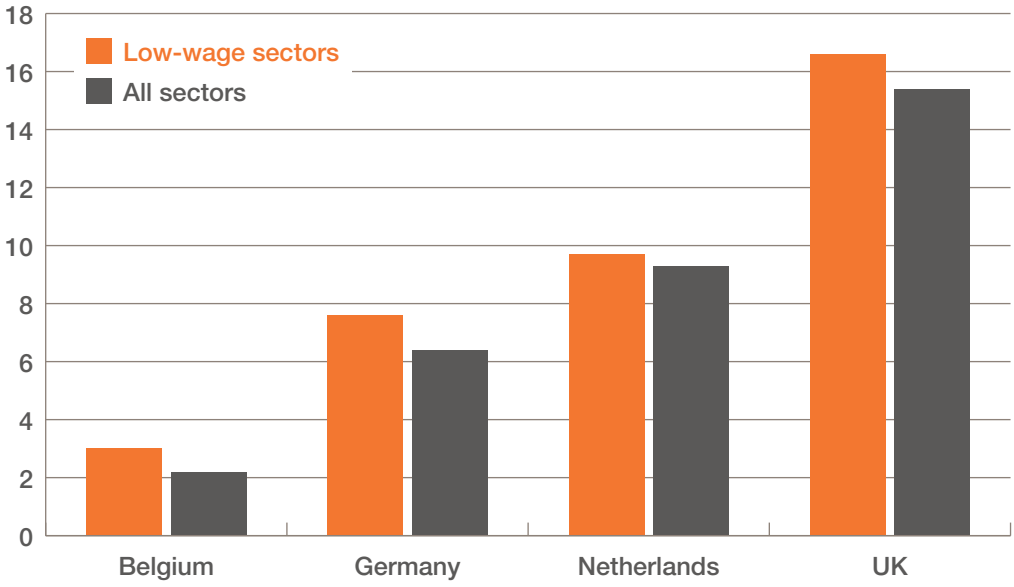
This suggests that policies to increase competition – such as reductions in the regulatory burden in order to encourage new market entrants – would support productivity growth in the low-wage sectors. But excessive regulation is unlikely to be an issue in the UK. According to OECD measures, the UK has the second-lowest level of product market regulation in the OECD, and an extremely flexible labour market (OECD 2015).

If a lack of competition were the cause of disappointing productivity among the UK's low-wage sectors, we would expect to see other indications that competition in the sectors is weak, such as low levels of business startups, or poor rates of business growth. In fact the UK performs well on business births[7]: the low-wage sectors have a higher rate of business creation than the economy-wide average, and a far higher business birth rate than other countries (figure 3.6).

FIGURE 3.6

The UK performs well on rates of business startups in low-wage sectors

Business birth rate, calculated as a proportion of the total population of active businesses (%, 2013)



Source: Eurostat, 'Business Demography Statistics' (Eurostat 2016c)

Beyond starting a business, being able to grow is also important in realising the potential of new entrants into a market. Evidence suggests that a small number of high-growth firms play a disproportionate role in economic and jobs growth. The low-wage sectors do seem to have high-growth firms, with one study finding that between 2002 and 2008 around 30 per cent of high-growth firms were situated in the retail and wholesale, and hotel and restaurant sectors (Nesta 2009).

7 The number of new startups expressed as a percentage of all businesses in a given sector.

The UK's low-wage sectors also have a similar proportion of high-growth firms to their equivalents in other countries. The proportion of firms classed as high-growth[8] within each sector ranges from 10 to 15 per cent in the UK – very similar to the levels seen in Germany and the Netherlands, and higher than Belgium and France (see figure 3.7).

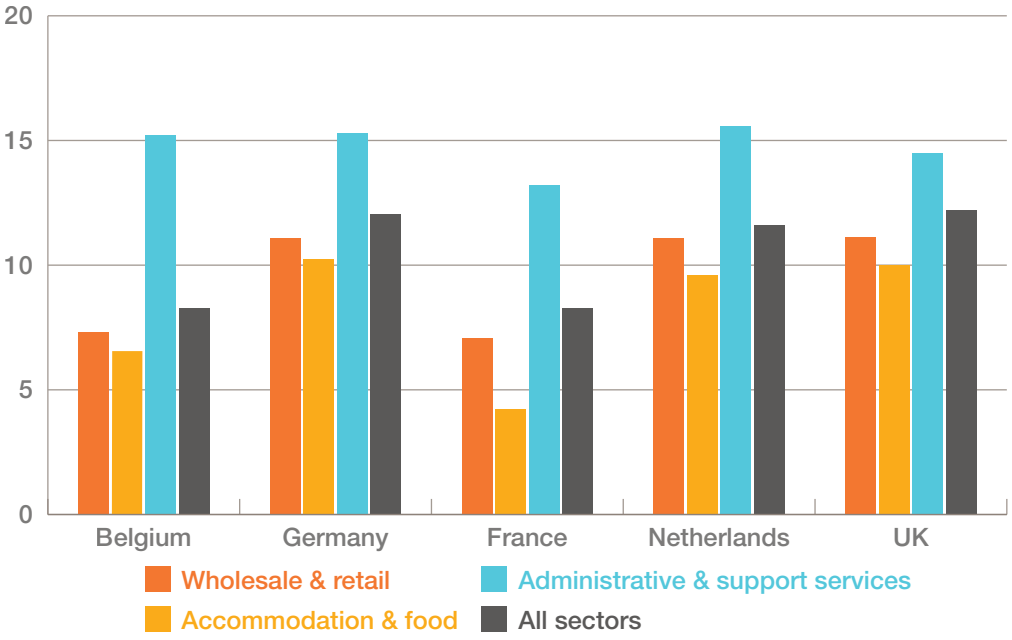
Although the UK is by no means a poor performer when it comes to business growth, it is interesting that the low-wage sectors' stellar performance on business startups does not translate into an above-average proportion of high-growth firms. There are several potential reasons for this. It could be that the low-wage sectors face particular challenges accessing the finance they need to grow, as they tend to have low levels of collateral and, in the case of younger firms, a lack of a demonstrable track record. Survey evidence suggests that small businesses in the retail, wholesale, accommodation and food sectors are the most likely to encounter difficulties in accessing finance; furthermore applications for finance in these sectors declined by 7 per cent between 2012 and 2014 (BIS 2015a).

Other obstacles potentially inhibiting growth in these sectors include cash flow more generally, management skills, recruitment and the availability and cost of premises (Lee 2012). These are likely to be areas where policy can play a role.

FIGURE 3.7

The UK's low-wage sectors have a similar proportion of high-growth firms to their equivalents in other countries

High-growth firms in UK and international low-wage sectors (%)



Source: Eurostat, 'High growth enterprises and gazelles by size class and NACE Rev. 2 activity (B-N_X_K) (eip_pop3)' (Eurostat 2016d)

8 Measured as the proportion of businesses achieving 10 per cent or higher employment growth per year. It's worth noting that high employment growth can be achieved via sustained low productivity.

Low-wage sector investment

Investment in physical capital raises productivity by enabling higher returns from the same or lower levels of other inputs such as labour. By giving workers new and more efficient tools businesses can increase labour productivity (ONS 2007). Investment in capital also plays a role in facilitating the introduction of new technologies (HM Treasury 2000).

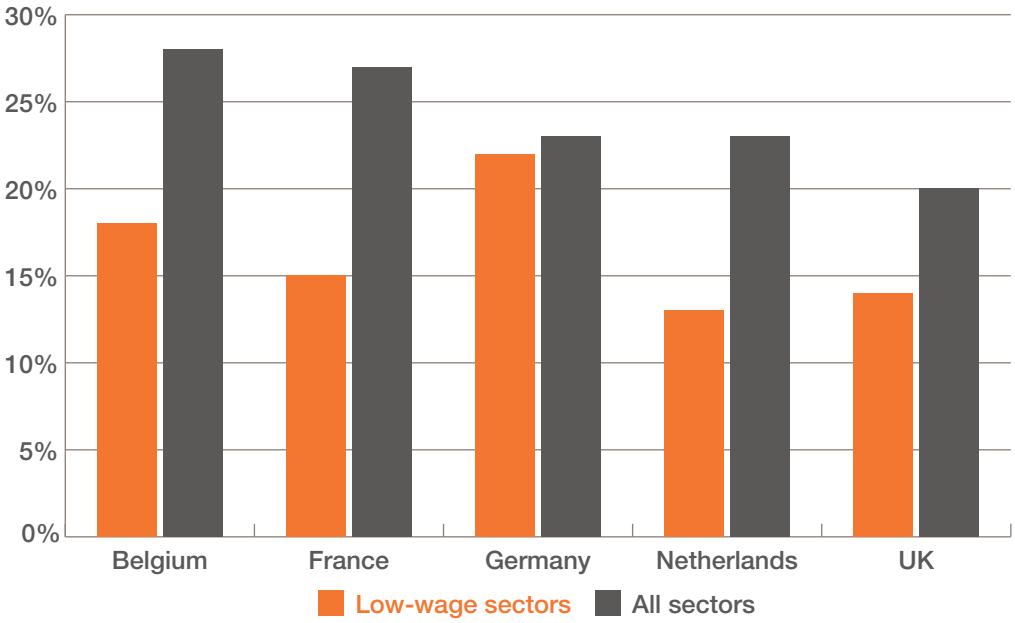
The UK's low-wage sectors – and the low-wage sectors of our comparator countries – are characterised by below-average levels of capital investment as a proportion of GVA (see figure 3.8). This is what we might expect given the labour-intensive nature of retail, hospitality and cleaning businesses in comparison to manufacturing or construction, for example.

Although all countries' low-wage sectors tend to invest less in capital than the rest of their economies, capital investment in 2014 was lower in the UK's low-wage sectors than in Belgium, France and Germany (although about the same as the Netherlands). This is at least partly a reflection of our lower propensity to invest as a country: the UK also underperforms on capital investment relative to comparator countries at a whole-economy level.

FIGURE 3.8

Capital investment in the UK's low-wage sectors is lower than in comparator countries

Capital investment in the UK and comparator countries, low-wage sectors and other sectors (% of sector GVA), 2014



Source: OECD, *The future of productivity* (OECD 2015)

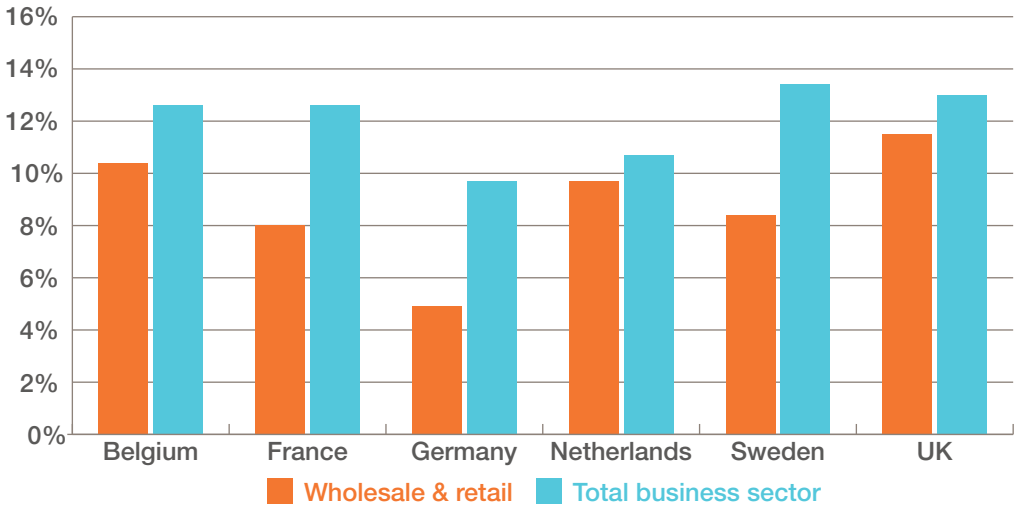
It could be that, for the low-wage sectors, investment in intangible assets is just as important as investment in machinery and equipment. Intangible assets include software, branding, training, design, and research and development, and have all been shown to increase productivity at an economy-wide level (Marrano et al 2007).

Focusing on retail and wholesale,[9] the UK actually performs better than competitor countries on measures of intangible investment, with retail and wholesale firms spending an average of over 10 per cent of their GVA on investment in intangibles (see figure 3.9).

FIGURE 3.9

The UK performs well on intangible investment in retail and wholesale

Intangible investment in the UK and comparator countries (% of GVA, 2010)



Source: Corrado et al, 'Intangible Capital and Growth in Advanced Economies: Measurement Methods and Comparative Results' (Corrado et al 2012)

Design and marketing are examples of intangible investments that are particularly relevant to low-wage sector productivity. When a firm introduces an innovative product but does not invest in marketing, the impact on business growth is more limited (Junge et al 2012). Investment in design inputs including product, process and service design is both an important component of innovative activity (accounting for 10 per cent of innovation spend across the whole economy), but is also highly associated with product innovation and generates a sizable marginal return (Cereda et al 2005). However, only around 10 per cent of all firms report spending on design, and 12 per cent on marketing methods.

Case study: Manchester creative credits

Due to of a perceived lack of evidence on the efficacy of business support policies, Nesta funded a pilot programme in Manchester that aimed to provide small businesses with funding to purchase creative services from other local creative businesses. The pilot focused on the creative sector as there is a body of research to suggest that purchase of creative services is linked with higher levels of innovation. An evaluation of the pilot, which followed a randomised experiment model, (Bakshi et al 2013) found that being awarded a voucher increased businesses' use of creative services by 84 per

9 The sector for which data is available.

cent, as well as increasing their likelihood of introducing product and process innovations and reporting sales growth. It did not, however, lead to a permanent increase in innovative activity among those firms that participated, and also suggested future versions of the scheme should follow a brokerage model to facilitate the relationship between SMEs and creative suppliers.

The role of skills and human capital in the low-wage sectors

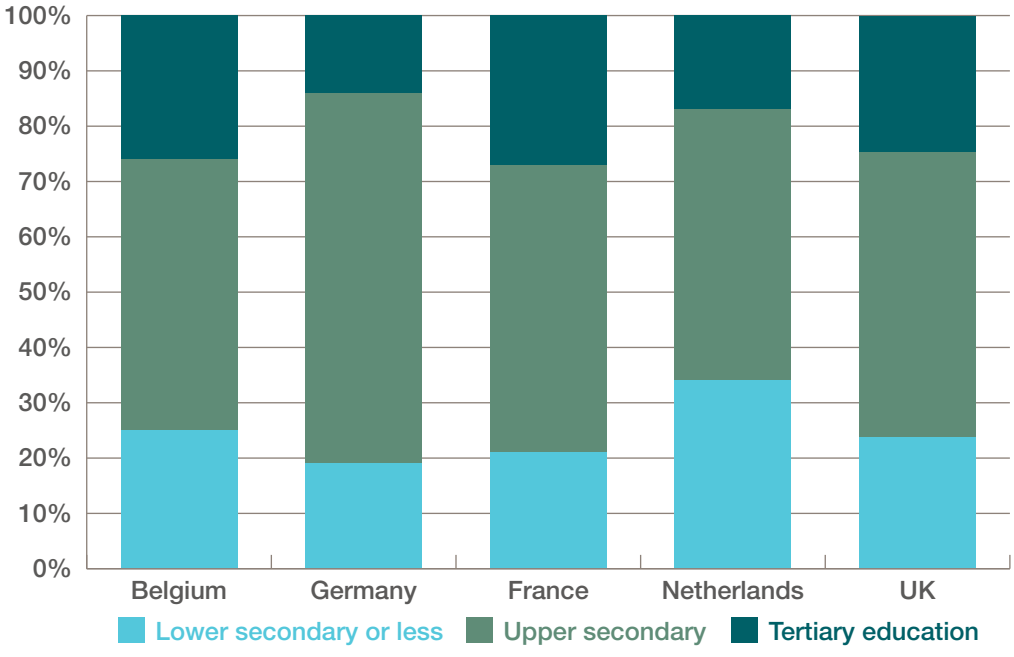
Human capital growth directly increases productivity by raising the productive potential of employees (HM Treasury 2000). Studies have shown that a higher average level of education within a firm is associated with higher productivity, as is the provision of training programmes by firms (Black and Lynch 1996).

A more highly skilled workforce is associated with higher productivity (Gambin et al 2009). Therefore, the overall level of skills in the general population, as well as firm-level skills, is a key determinant of productivity levels. The UK's low-wage sectors to do not have a noticeably different profile of educational attainment than their international equivalents, which suggests that differences in educational attainment are not the key cause of lower productivity in these sectors (see figure 3.10).

FIGURE 3.10

The UK ranks in the middle of comparator countries on measures of educational attainment

Distribution of educational attainment in low-wage sectors, UK and comparator countries (% of total)



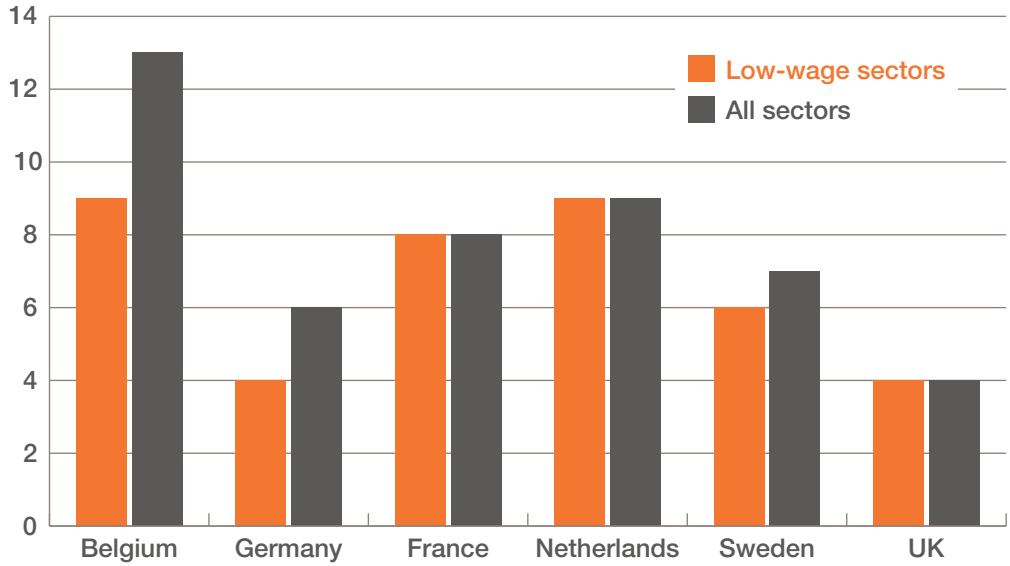
Source: Eurostat, 'National Accounts aggregates by industry' (Eurostat 2016a)

Firms tend to underinvest in training for employees, as there is a risk that employees will change jobs, and therefore that the employer will not benefit in full from their investment. Employees in the UK's low-wage sectors receive a similar volume of training as the rest of the economy, but both are on the low side relative to comparator countries (see figure 3.11). This may be due to a lack of demand among businesses for skills, or because high staff turnover rates mean that training provision is viewed as a poor investment.

FIGURE 3.11

UK low-wage sector employees receive less training than in comparator countries

Hours of employer-provided training in the UK and comparator countries (hours per 1,000 hours worked)



Source: Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)

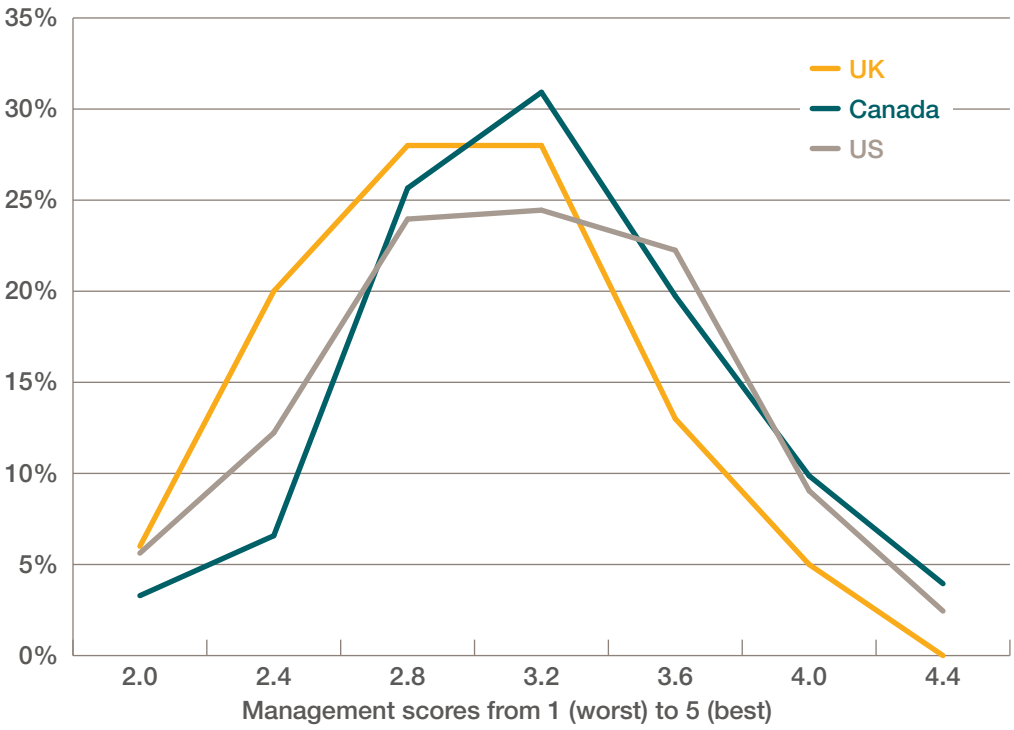
One particular dimension of human capital shown to be strongly linked to productivity is the quality of management within firms. The incidence of 'good management' – as measured by target setting and quality, performance review, incentives for good performance, and attracting and retaining talented workers – varies considerably across countries and between firms (Bloom and Van Reenen 2010a). The UK in particular performs poorly on measures of management (Bloom and Van Reenen 2010b). A study that looked at retail in particular found that the UK scored half as well on management measures as Canada and the US, and had very few high-quality management firms in the sector (Bloom et al 2012). And, based on qualifications, it is true that low-wage sector managers are lower-skilled than in other sectors: estimates derived from the Labour Force Survey show that a third of managers in low-wage sectors held a degree, versus 55 per cent in other sectors (ONS 2015). A key finding of this literature is that management practices can be viewed as a technology, but one that is enabled by other technologies (such as

using new software to monitor performance), and that must be diffused across and within sectors in the economy (Bloom et al 2014).

FIGURE 3.12

A greater share of the UK's retail firms have a low management score than in the US or Canada

Distribution of firm-level management scores, retail sector, UK, US and Canada



Source: Bloom and Van Reenen, 'Why do Management Practices Differ across Firms and Countries?' (Bloom and Van Reenen 2010b)

Case study: management training programmes in the hotel industry (US)

Choi and Dickson (2009) studied a training programme for managers in a lodging company with 750 employees in the northeastern United States. The training consisted of four modules, including interview and assessment best practice, strategies to deal with issues of diversity and harassment, an analytical framework for assessing the strengths and weaknesses of new employees, and a consistent company-wide employee appraisal system. The ultimate aim of the training was to reduce employee turnover and enhance employee satisfaction. One year after the training was completed employee turnover had fallen from 89 to 57 per cent, with employee satisfaction scores up 13 per cent.

Increasing skills in the workforce has been shown to have a positive impact on firm-level productivity (see box). It does not follow, however, that simply increasing the educational attainment of a firm's workforce leads to higher productivity. Indeed, there is evidence that many highly skilled workers in low-wage sectors are employed in lower-skilled occupations and earning lower wages than would be expected given their level of educational attainment. Research suggests that the effective utilisation of skills is key in driving improvements in productivity (Wright and Sissons 2012). One UK study found that between 35 and 45 per cent of employees feel their skills are underutilised in the workplace (Brinkley et al 2009). It is likely both the supply and the use of skills are key challenges for low-wage sectors.

There is a link between business strategies in low-wage sectors that seek to minimise employee costs and poor business performance. Ton (2011), for example, shows how employee cost-minimisation strategies lead to weaker sales growth in the retail sector. Such strategies are caused by an undue focus on short-term measures of performance that privilege immediate boosts in profitability through the reduction of variable costs such as employee headcount and hours as well as lower levels of investment in training. These then lead to higher rates of employee turnover and poorer customer service. In the UK there is early evidence that business strategies that instead seek to invest in their workforce through higher pay, more training, progression opportunities and employee benefits – alongside changes to employee management such as granting more autonomy – can lead to better customer services and stronger sales growth without having to reduce prices. A key barrier preventing greater adoption of such strategies is that a lack of competitive pressure means that many firms do not need to change behaviour in order to continue generating profits. A second barrier is that many firms, for different reasons, are focused on the short term, either because of cash flow considerations (particularly among smaller firms), or because of the needs of quarterly profits reporting and their impact on managerial strategies (among larger firms) (Ton 2014).

Case study: Trader Joe's (US)

Trader Joe's is a US supermarket chain with over 450 stores, which posted $9.4 billion in sales in 2014. A starting wage for a full-time employee is between $40,000 and $60,000, which is double the offer made by some retailers. All staff members receive cross-training in different disciplines, so that each day they are ready to respond to different priorities. All managers are promoted from within the workforce so each employee has a clear opportunity for progression and this is reflected in an employee turnover rate of 10 per cent. At the same time, Trader Joe's frequently posts one of the highest levels of customer satisfaction.

Trader Joe's keeps its prices low by offering a smaller range of products that allows them to advertise 'everyday low prices' rather than a complex series of promotions. In the US, the average number of individual product types offered by a supermarket is 39,000 while Trader Joe's offers only 4,000. As well as helping keep prices low,

the smaller stock range helps staff execute operational functions efficiently, such as identifying items of stock to replace on the shop floor. In terms of productivity, Trader Joe's sells over $1,734 per square foot compared with $930 at a rival firm, Wholefoods.

There are several key principles that a successful retailer follows according to Ton (2011), which are identifiable in Trader Joe's business model. First, they view labour as an investment and not a cost; second, they offer a narrower range of products; third, they provide employees with a stable and predictable work schedule; fourth, they pursue an integrated supply chain; and finally, they give greater scope for worker discretion.

When employees feel they have a stake in the firm's performance, their commitment to that organisation is strengthened and reflected in greater instances of discretionary effort (IPA 2011). Gallup estimates that a disengaged workforce costs the UK economy almost £60 billion each year, through employee sick days and reduced effort, among other factors. Furthermore, firm-based innovations are more likely to be boosted through co-operation as employees and customers are a common source of ideas (Mayo 2015).

One particular form of employee voice is employee ownership. Retail, housing, and banking are all examples of sectors in which diverse range of ownership models have been applied. The way in which a workplace is organised plays an important role in a firm's level of success. Employee-ownership places greater responsibility for the development of a firm with employees. The placing of a firm's people at the centre of its strategy has been cited as a factor that can drive up productivity levels. Due to the presence of a strong employee voice, worker-owned firms place great emphasis on job security and set their rates of pay above the sector averages (Logue and Yates 2005). Recent studies have argued that a causal link exists between employee-owned structures and increased levels of innovation and productivity. However, any employee stake needs to be significant enough to ensure high levels of employee engagement (Lampel et al 2012, BIS 2012, Mayo 2015). Several studies carried out into cooperative and worker-owned firms have found the business model to be more economically resilient during recessions. Furthermore, new business startups that are organised along cooperative lines have a higher survival rate than other types of similarly sized new firms (Logue and Yates 2005, Mayo 2015, Roelants et al 2014).

Employee-owned businesses report higher levels of wellbeing and engagement. As a way to organise a workplace there is a strong case to state that the productivity benefits will disproportionately occur in SMEs (Reeves et al 2014). As a key to stimulating productivity increases in the low-wage sectors there would be potential productivity gains to be attained by increasing the proportion of employee ownership among SMEs. Furthermore, the emergence of a more co-operative workplace at one part of the supply chain can have a cascade effect that sees employee-owned businesses and other cooperatives trade in preference with other similarly organised firms along supply chains.

Case study: Unicorn Grocery (Manchester)

The Unicorn Grocery in south Manchester specialises in supplying sustainable, basic ingredients (one-fifth of its sales are dry foods such as pulses, grains, fruits, nuts and seeds) and one member-employee summarised the business's ethos as 'good relationships are key'. These relationships include those between employees, between staff and customers, and between the grocery and its network of suppliers. Through long-term trade, the grocery has established a network of supply strengthened through trust.

Unicorn is a worker-owned cooperative. This means the firm is owned and run by its employees, who play a dynamic and active role in shaping all facets of the business strategy. A relatively flat management structure means decisions are arrived at through consensus, and as members share responsibility for the performance of the business they receive financial training to ensure familiarity with profit and loss, balance sheets and forecasts.

The democratic structure suggests that one challenge might be arriving at decisions that affect the business trajectory. However, one member explained that instances of grievance hardly ever occur and that forward momentum is usually reached through discussion and compromise. Furthermore, the opportunity to express dissent within an equal forum proved 'cathartic' and helped to cultivate an atmosphere at the organisation which was described as akin to a 'family feeling'.

Although this particular brand of management throws up its own challenges, the store's employees report higher levels of job satisfaction than comparable retail jobs. This is reflected in the low level of sickness absence and a high retention rate. In 2010, the staff retention rate was 75 per cent and the sickness absence rate was around 3 per cent.

Innovation in low-wage sectors

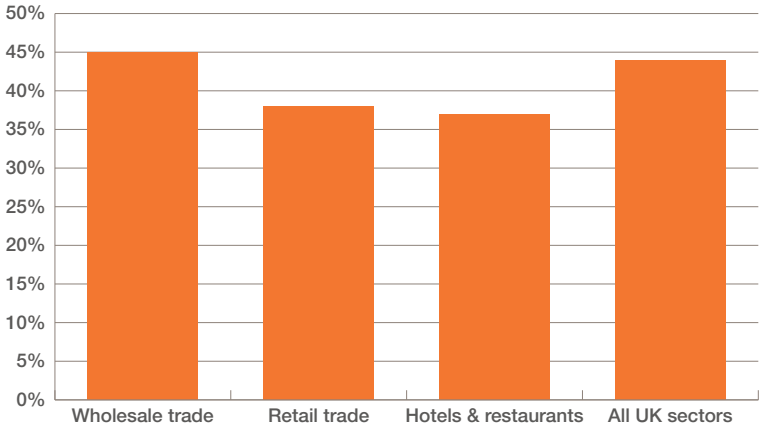
Innovation comes in several forms, including bringing new products to market, making changes to production processes, innovations in the marketing of products and changes to workplace organisation and management (European Commission 2014). There are also substantial spillover effects from one firm's investment in innovation and R&D, meaning that the benefits of one firm's activity may be shared by other firms, boosting economy-wide productivity.

Innovation among firms in the low-wage sectors tends to be lower than the whole-economy average (see figure 3.13). In addition, low-wage sector businesses innovate differently, relying less on internal and external research and development and more on acquiring tangible and intangible capital, and spending on the market introductions of innovation (such as marketing and advertising spending) than the economy-wide average (see figure 3.14).

FIGURE 3.13

Innovation among firms in the low-wage sectors tends to be lower than the whole-economy average

Proportion of firms that are innovation-active by sector, 2012

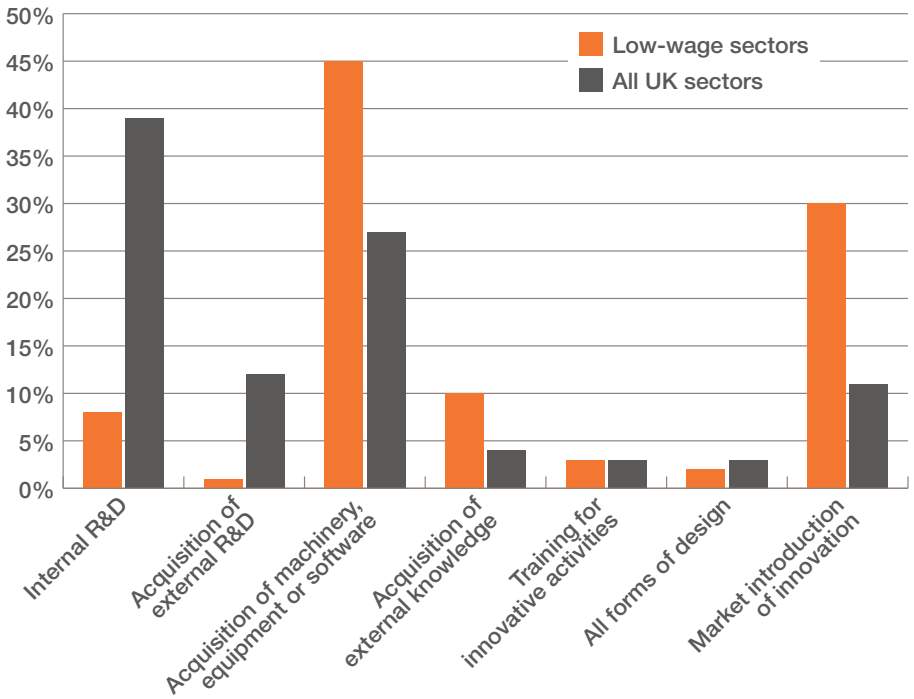


Source: BIS, 'UK Innovation Survey 2013' (BIS 2013)
Notes: The definition of innovation activity here includes the introduction of a new or significantly improved product (good or service) or process; engagement in innovation projects not yet complete or abandoned; new and significantly improved forms of organisation, business structures or practices and marketing concepts or strategies; activities in areas such as internal research and development, training, and acquisition of external knowledge or machinery and equipment linked to innovation activities.

FIGURE 3.14

For low-wage firms, innovation is about more than just R&D

Innovation spending by category of innovation (% of total innovation spend)



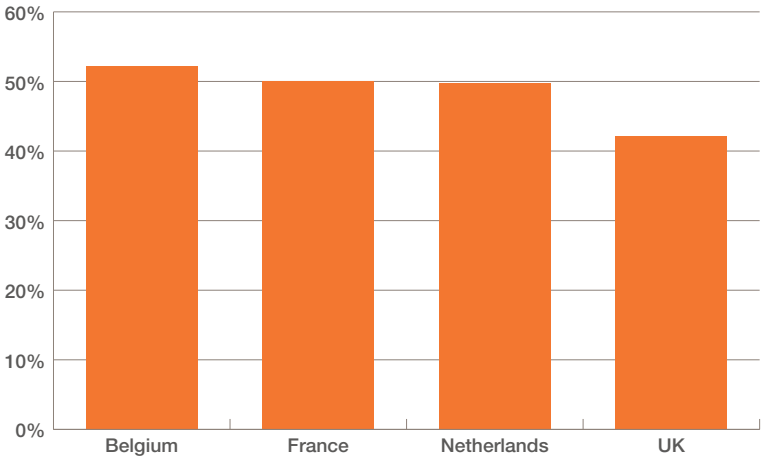
Source: BIS, 'UK Innovation Survey 2013' (BIS 2013)
Note: Shows proportion of total expenditure.

Business model innovation, such as changes to revenue or pricing models, new marketing methods and introduction of new goods, is increasingly seen as an important dimension of innovation (European Commission 2014). Some of the most noteworthy new businesses of recent years have achieved success through introducing a new business model into an existing market. At the same time, being able to adapt and change business models is key in generating productivity and revenue growth in more mature businesses (Liebenau 2008).

FIGURE 3.15

UK retail and wholesale firms lag behind comparator countries on innovation activity

Proportion of firms that are innovation-active, UK, Belgium, France and the Netherlands in the retail and wholesale sectors, 2012



Source: Eurostat, 'Results of the Community Innovation Survey' (Eurostat 2012)
Note: Data not available for other low-wage sectors.

Tekes: Finnish Funding Agency for Technology and Innovation

Since the mid-90s the Finnish government has publicly funded programmes to develop productivity and the quality of working life. In 2008 this was formalised into a broad-based innovation policy to be implemented by Tekes, the Funding Agency for Technology and Innovation. Tekes promotes a broad-based approach to innovation. Alongside funding for new technologies, it emphasises the significance of 'service-related design, business, and social innovations'. This reflects the belief that a growing number of innovations will be intangible and service-oriented.

The central idea is to expand the target of innovation policy to give more significance to non-technological innovations and to increase the positive joint impacts of technological and non-technological innovations. Tekes places a strong emphasis on the role of customers, users, ordinary employees and different kinds of workplace innovation.

Tekes is currently running a programme dedicated to promoting workplace driven innovation, known as *Liideri* or 'Business, Productivity and Joy at Work'. This programme assumes that employees are willing and able 'to learn, and develop and deploy their creativity in their job' (Warhurst and Wright 2014). Starting in 2012 and expected to run until 2018, *Liideri* aims to 'renew the business operations of companies through developing management and forms of working and actively utilising the skills and competencies of their personnel' (ibid).

The programme is deliberately consistent with the idea of broad-based innovation policy, aiming to integrate innovation in workplace organisation with traditional innovations in products and services. Tekes' vision is to have the best working life in Europe by 2020, and to translate this into highly productive workplaces.

The programme is focused on three areas:

- **management principles, processes and practices:** helping an organisation to promote initiative, creativity and the innovation potential of personnel
- **employee-driven innovation:** encouraging active and systematic participation of employees in innovation of products, services and ways of producing them
- **new ways of working:** work which transcends the boundaries of traditional temporal, spatial and organisational patterns and forms of work.

In an assessment of this Finnish program, over 70 per cent of the 400 funded cases demonstrated simultaneous improvement in operational performance and the quality of working life at the firm level (ibid).

One particular dimension of innovation relevant to low-wage sectors is the adoption of ICT technologies. Particular barriers to adoption have been identified among SMEs. Studies conducted across different countries show that this 'digital divide' is a feature across different economies and moreover, is a structural feature of business performance that predates the Great Recession. One study in 2008 examined a sample 378 SMEs located in the south-east of England and found that most SMEs are in favour of ICT adoption. However, this work also concluded that SME usage of ICT technology remains limited in practice and found evidence that showed low levels of strategic usage for this technology. A pronounced attitude among SME owners/managers meant ICT was treated as a costly expenditure and outside consultants and experts were viewed with suspicion. In part this was linked to the lack of managerial experience and training in the area of ICT (Hardrinath et al 2008). Another problem exacerbating the 'digital divide' pertained to the fact many SMEs were not aware of the existing policy instruments available at a local, national and European level deigned to aid the adoption of ICT. More recent studies suggest that these features of SME adoption of digital technology remain the same.

The problems facing SMEs and their access to use of digital technology are related to a lack of internal confidence around using new technologies. Despite the willingness of staff members to engage in ICT training, the lack of resources and perceived uncertainty over the direct benefit to the business has led to the prevalent conservatism towards digital adoption. The findings contained in these studies is borne out by a recent Department of Business, Innovation and Skills survey that concluded only 21 per cent of SMEs have ever sought out any advice on how to improve their digital capabilities (BIS 2015b). This proportion rises to 47 per cent of larger SMEs (50–249 employees), but there is clearly a lack of engagement between SMEs and the utilisation of available information, knowledge and training. However, owner-managers are aware of the importance of digital technology and benefits it can bring. SMEs are willing to embrace digital technology, but require encouragement to seek out correct information and practical support.

Case study: Digital retail productivity

McKinsey Global Institute estimates that online retail is 80 per cent more productive than modern bricks and mortar retailing. But they also find that significant productivity growth in more traditional retailing could come from adoption of best practice in digital retail applications, such as using big-data-driven analysis to optimise product ordering (such as automated ordering of frequently purchased products), shipping, and performance monitoring. They estimate that profit margins in an individual firm could grow by 60 per cent through adoption of these methods. Although cost and expertise is likely to be a barrier, encouraging more firms to adopt such industry-leading innovations could transform the productivity of the retail industry.

The role of firm size

The size of a business has been shown to impact on productivity. On the one hand, larger firms may be more productive, because of returns to scale, economies of scope (falling costs as the range of business activity increases), experience effects (producing each extra unit of output at lower cost) and organisational effects (reduced transaction costs by bringing more activity in house) (Castany et al 2005). However, larger firms may be less productive, because smaller firms tend to be younger and so may disproportionately account for new, disruptive and innovative entrants into a market, and because diseconomies of scale exist for larger organisations.

Finally, there is also a problem of measurement when it comes to analysing differences in productivity by firm size. This is particularly the case in retail, where larger format businesses and outlets can sell at lower prices than smaller stores, either because they buy at scale relative to small outlets or because smaller outlets include more specialised retailers selling at a greater margin and premium. This can have an impact on the distribution of productivity across firm sizes, where those productivity estimates do not factor in price differences (Griffith 2004).

Smaller firms in low-wage sectors do have lower productivity than larger businesses, with output per hour worked in 2014 of £27 among

firms with one to nine employees, versus £30 for those with 10 to 49 employees and £46 in firms with 50 to 249 employees. Beyond a certain size, however, a firm's productivity looks to decline: the largest firms have average productivity of £34 per hour (although there may also be issues related to measurement, as set out above).

TABLE 3.1

Output per hour by firm size in UK retail, wholesale, hotels and restaurants (2014)

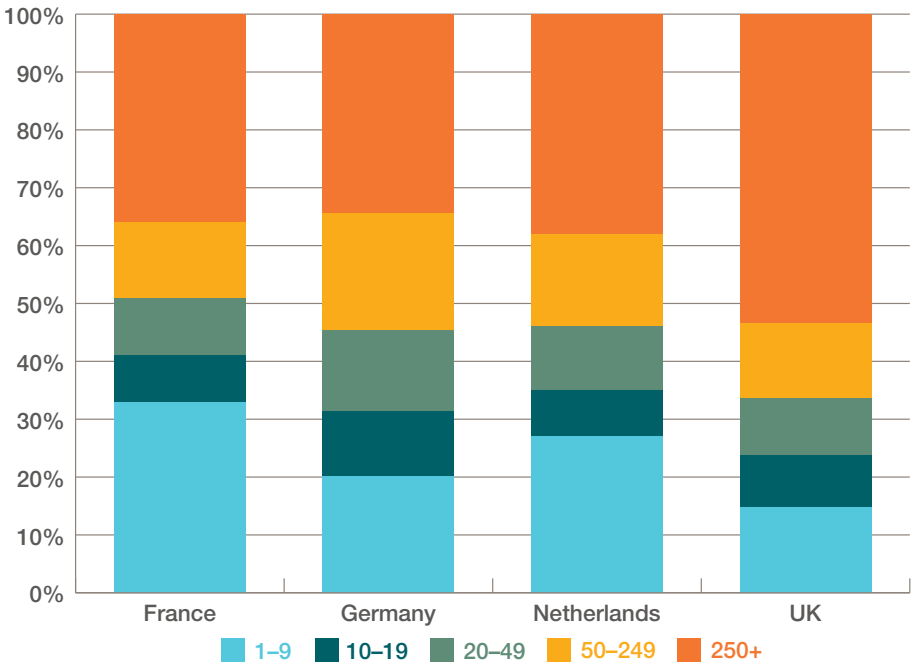
Number of employees	Output per hour worked
1–9	27
10–49	30
50–249	46
250+	34

Source: ONS, 'Annual Business Survey' (ONS 2014)

Figure 3.16 shows that more than half of all low-wage sector employees work for a big employer – a much larger proportion than is found in France, Germany or the Netherlands. This could be a crucial point of difference between the UK's low-wage sectors and their more productive equivalents abroad.

FIGURE 3.16

A much larger proportion of all low-wage sector employees in the UK work for a big employer than in France, Germany or the Netherlands
Share of employment by firm size (measured by number of employees) in low-wage sectors, UK and international

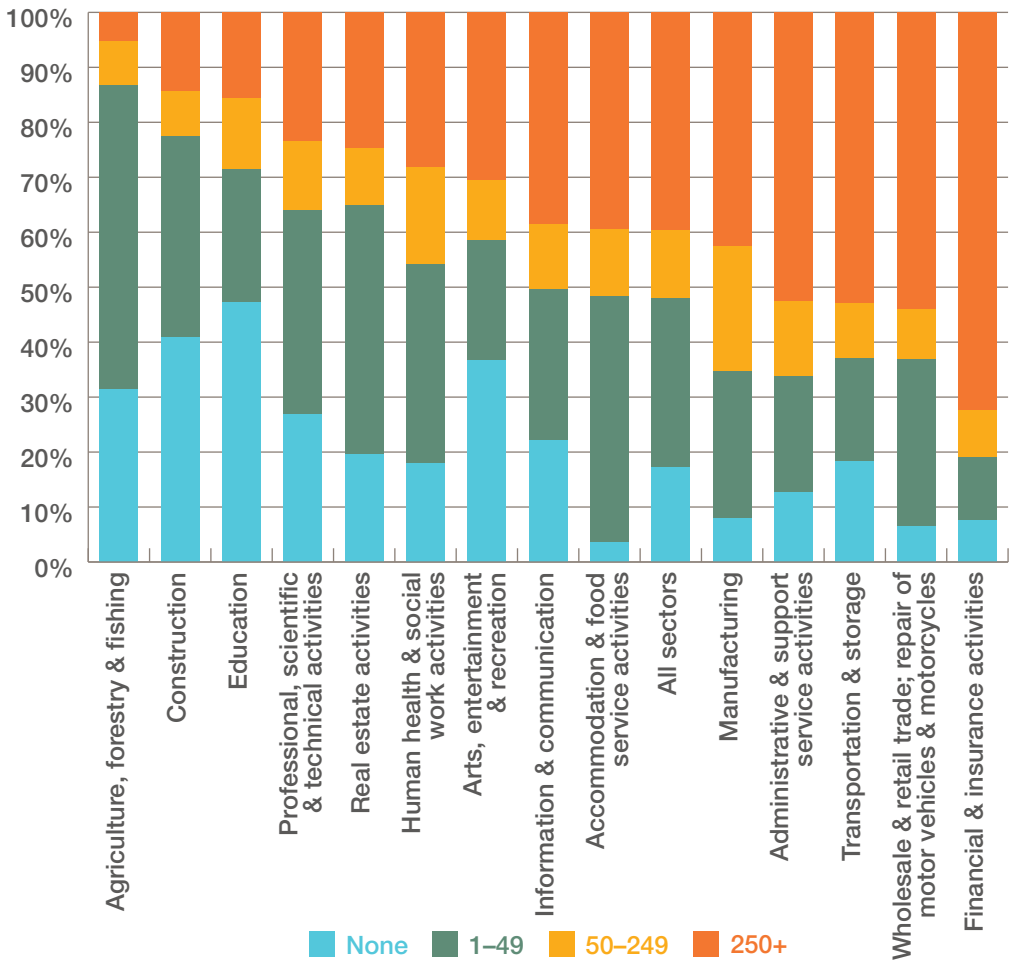


Source: OECD, 'SDBS Structural Business Statistics' (OECD 2016)
Note: Low-wage sectors defined here as retail and wholesale, accommodation and food and business support services.

Examining the share of employment by firm size in different sectors reveals that the retail and administrative services sectors (the largest of the low-wage sectors) are dominated by large firms (see figure 3.17). In both of these sectors more than half of the workforce is employed in a business with more than 250 employees. These sectors have a disproportionate share of employees working in large firms – the economy-wide average is just 40 per cent. After large firms, employees in these sectors are most likely to work in a small business, with between 1 and 49 employees. In the accommodation and food sector 40 per cent of workers are employed in large firms (with more than 250 employees) but even more (44 per cent) work in small firms (with between 1 and 49 employees). This is much higher than the economy-wide average of 31 per cent. The distribution of employment is more evenly spread in the arts, entertainment and recreation sector, where most workers are sole traders.

FIGURE 3.17

The largest of the UK's low-wage sectors are dominated by large firms
Share of employment by firm size (measured by number of employees) in all sectors, UK



Source: BIS, 'Business population estimates for the UK and regions 2015: detailed tables' (BIS 2015c)
Notes: Excludes sectors B, D, E and S due to missing data (Mining and Quarrying; Electricity, Gas and Air Conditioning Supply; Water Supply; Sewerage, Waste Management and Remediation Activities and Other Service Activities).

3.3 WILL PRODUCTIVITY GROWTH IN LOW-WAGE SECTORS LEAD TO JOB LOSSES?

One concern regularly voiced in relation to productivity growth in a particular sector is that it may lead to job losses, since productivity gains reduce the number of workers required to produce the same volume of output. The UK's historical experience certainly suggests grounds for concern: taking the example of manufacturing, the combination of big productivity gains between 1998 and 2007 and only a moderate rise in sectoral output meant that employment fell by more than 30 per cent over the period (Dolphin and Hatfield 2015). It is certainly possible to argue that if firms respond to the national living wage by substituting machines or software for labour, the result will be fewer jobs.

In fact, the relationship between productivity increases and employment is not clear-cut. Several forces push in the opposite direction. First, if the workers that aren't displaced by technology are paid more as their productivity rises, then the resulting increase in aggregate demand could increase demand for workers, offsetting the initial job losses (this is called the compensation effect).

Second, businesses may choose to pass the cost savings from higher productivity on to consumers in the form of lower prices, boosting purchasing power than therefore (again) aggregate demand. This is a more likely outcome for the low-wage sectors than was the case for manufacturing, since prices for low-wage sector products and services tend to be determined locally rather than globally, as discussed above.

There are other ways in which these sectors' activities differentiate them from manufacturing. They tend to serve local markets, and are on the whole untradeable, which means that cheaper workers in other countries cannot take on the work of low-wage sector employees here. The tradeable nature of manufacturing outputs has been a crucial driver of job losses within UK manufacturing.

International comparisons suggest that it is possible to have both a more productive workforce, and a high level of employment within the low-wage sectors. While the UK does have a significantly higher share of hours worked in the low-wage sectors than both Belgium and Germany, France and the Netherlands have a similar share (see table 3.2).

TABLE 3.2

Employment share (by hours worked) in the low-wage sectors by country, percentages, 2014

Belgium	France	Germany	Netherlands	UK
27	32	28	34	33

Source: IPPR calculations using Eurostat, 'National Accounts aggregates by industry', (Eurostat 2016a) and Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)

In aggregate the UK economy will gain from any productivity growth spurred by the national living wage. Some relatively unproductive jobs may go, but at the same time, the new higher minimum wage means a pay rise for a large number of workers who are very likely to spend it. Overall, we would expect continued strong demand growth to create new jobs for any workers displaced by structural change in the low-wage sectors.

3.4 CONCLUSION: THE BARRIERS TO PRODUCTIVITY GROWTH IN LOW-WAGE SECTORS AND THE JUSTIFICATION FOR POLICY ACTION

The UK's low-wage sectors have several characteristics, relative to both their counterparts internationally and other UK sectors, that are a cause for concern. These include:

- **A lower proportion of workers in low-wage sectors have degree-level qualifications, and firms in low-wage sectors are less likely to offer training**, indicating an issue with skills in low-wage sectors, particularly among managers.
- **Firms in low-wage sectors are less likely to engage in innovation than both other UK sectors, and low-wage sectors in competitor countries**. In particular, the application of ICT to low-wage sectors is not complete, with SMEs in particular facing barriers to adoption.
- **The high rate of business births relative to other countries does not translate into a commensurately high proportion of high-growth businesses within the low-wage sectors**. There is little evidence of barriers to competition in the low-wage sectors, but there may be issues around access to finance to facilitate expansion.

There are several reasons for intervening to raise productivity among our low-wage sectors. The most compelling is their sheer size: they account for a third of UK employment, which means they have a significant impact on whole-economy productivity, as well as on wage growth and therefore living standards. At the March 2016 budget, the OBR downgraded the UK's long-term productivity forecast, having reached the conclusion that trend productivity growth looked to be settling at a permanently lower rate. Improving this outlook is rightly a priority for the government, but no significant improvement will be achieved without boosting the productivity of low-wage sector firms.

Our analysis has found that businesses in these sectors have tended to underinvest in capital, training and innovation for many years, even though such investment would ultimately benefit those businesses in the long run. This suggests that there is little reason to hope that they will increase their investment activity without some form of government intervention. Further, investment has wider benefits that the investing firm cannot fully capture – these positive externalities imply a case for government to intervene to raise investment levels.

The introduction of the national living wage in April 2016 has created an additional imperative for government support. The fact that our

European neighbours achieve higher productivity within their low-wage activities provides cause for optimism: there is plenty of potential for businesses in low-wage sectors to increase productivity. But we also know that there is more than one possible response to a higher wage bill. We have already seen tentative evidence that some employers are not choosing to review business operations with a view to raising productivity – but are instead simply cutting back on unprotected costs, such as non-wage staff benefits.[10]

If employers choose to absorb the costs of the higher wage by reducing other aspects of their labour budget (such as benefits or training), this could actually have a *detrimental* impact on productivity. Employers may find themselves trapped in a vicious cycle, in which low labour budgets feed through into low quality or quantity of labour, poor operational execution and reduced sales and profits (Ton 2012).

10 See for example Butler 2016, Ellson 2016 and Sheffield 2016.

4.
A PRODUCTIVITY STRATEGY FOR LOW-WAGE SECTORS

We believe all levels of government should be taking the poor productivity performance of the UK's low- wage sectors more seriously. While this is by no means a new problem, the introduction of the national living wage provides both an imperative and an opportunity for policymakers to act to support productivity growth in these sectors.

In order to do this, we propose policies tailored to the particular needs and characteristics of the low-wage sectors, in particular their low levels of innovation, poor management practices and weak utilisation of skills.

In making policy recommendations to support low-wage sector productivity, we have three priorities:

- **Activating demand on the part of businesses in low-wage sectors for productivity improvements**. Improving low-wage sector productivity is less about encouraging radical innovations that are new to the economy or sector, and more about getting the long tail of low-productivity businesses in these sectors to attain the same level of productivity seen in the best-run businesses in their sector (both in the UK and internationally). To that end, our focus is on disseminating to businesses in these sectors the latest thinking in areas such as management, workplace organisation and job design, skills utilisation and business processes, as well as providing them with support for adoption of these innovations.
- **Rebalancing existing public productivity, innovation and growth spend so that low-wage sectors are given a level of assistance proportionate to their importance to the UK economy.** In many instances, the sizable amount of public funding used to support economic growth and innovation is targeted at manufacturing and other technology-intensive sectors. While this support is hugely important, we argue that low-wage service sectors have long lost out on these funding streams and that this disparity should be addressed.
- **Improving the level of skill in low-wage sectors, particularly those relating to management practices.** Low-wage sectors currently display weak demand for skills, as well as employing fewer workers educated to degree level. The NLW places an additional imperative on employers to increase the productivity of their employees, and increasing their skill levels is one way to do that.

To deliver on these priorities, we propose the following action, first, to activate demand for productivity improvements and rebalance innovation and growth spend; and second, to boost skill levels.

4.1 ACTIVATING DEMAND FOR PRODUCTIVITY IMPROVEMENTS AND REBALANCING INNOVATION AND GROWTH SPEND

Innovate UK is focused on supporting science and technology innovations to grow the UK economy. It targets support at four groups of high-growth sectors: emerging and enabling technologies, infrastructure systems, health and life sciences and manufacturing and materials. It is also introducing an 'open programme' which will support businesses from any economic sector with plans to innovate. In the low-wage sectors, the innovations that boost productivity tend to be people-driven rather than technology-driven. Therefore, **Innovate UK should use its 'open programme' to expand its funding criteria to innovations in workplace organisation, job design, leadership and management**, drawing lessons from international experience, including Tekes, the Finnish Funding Agency for Technology and Innovation.

Growth hubs are being embedded in every local enterprise partnership area, giving local areas control over how they support small businesses to start and scale up. These **growth hubs should provide targeted advice and information to businesses in the low-wage sectors**, and signpost Innovate UK's new 'open programme' to businesses in all sectors of the economy.

The government plans to spend £12 billion by 2019 on supporting local growth through the city deals process. This represents a huge opportunity for local leaders to drive this agenda and boost the productivity of low-wage sector businesses in their regions. **Local partners should be encouraged to include their plans to prioritise the performance of their low-wage firms when they bid into the Local Growth Fund** – these plans should be taken into account when evaluating bids.

We believe that encouraging employee-owned businesses, and other forms of stakeholder ownership, would boost employee engagement, and therefore productivity. At present, the regulatory burden differs across organisational types: for example, because cooperative and community benefit societies report to the Financial Conduct Authority (FCA) rather than Companies House, they face more burdensome account reporting and audit requirements than companies for a given level of turnover . To rectify this, the Treasury and FCA should take steps to align the financial reporting requirements for small co-ops with those for small companies.[11] More broadly, eligibility for business support is often dependent on the business in question being registered with Companies House – but most cooperatives are registered with the FCA rather than Companies House. **BIS should equalise eligibility criteria to ensure that businesses using alternative models of ownership are able to access the government support on offer.**

4.2 BOOSTING SKILL LEVELS

While the number of apprentices has grown in recent years at all levels, the provision of higher (level 4+) apprenticeships in subject areas relevant to low-wage sectors is vanishingly small. In 2014/15, there were only 250

11 See: http://www.uk.coop/promoting-co-ops/levelling-playing-field/live-issues

higher-level apprenticeship starts in retail and commercial enterprise, versus 21,000 at advanced level and 68,000 at intermediate level, despite a range of qualifications available in areas such as facilities, retail and supply chain management. This is despite higher-level apprenticeships commanding a sizable wage premium, estimated to be 23.2 per cent for those who subsequently work in the distribution, hotels and restaurants sector (NAO 2012).

The apprenticeship levy requires large employers to make a payment to HMRC to fund training and assessment for apprentices in England. Employers will be able to access funds through new digital apprenticeship service accounts. In current plans the government will provide a 10 per cent top-up to these funds. **We recommend that the top-up should vary with the level of the apprenticeship: higher for level 4+, and lower for levels 2 and 3.** The variation could either be designed such that the overall impact is cost-neutral (that is, by reducing the level 2 top-up to below 10 per cent), or the higher top-up for level 4+, apprenticeships could be provided as a 'bonus' once the higher-level apprenticeship has commenced, in order to uphold the government's commitment of a minimum 10 per cent top-up for all apprenticeships.

Businesses should establish degree apprenticeships for the biggest low-wage sectors, starting with wholesale and retail, following the model recently developed for aerospace and other high-growth sectors. Government should play a coordinating and convening role to bring together businesses, universities and vocational training providers, to give a tailored education in the skills required to undertake a leadership role in a successful retail or wholesale business.

To pay for it, government should consider reducing public funding for those degree apprenticeships that have attracted a large amount of private funding relative to the skills need within those sectors.

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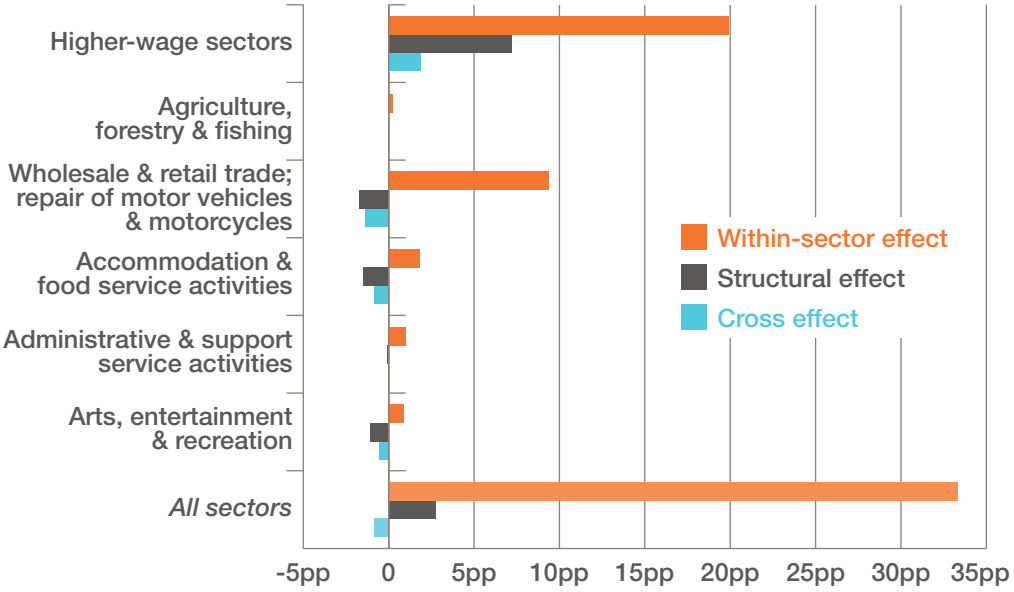
APPENDIX

The following figures show the results of shift-share analysis for the UK productivity gap with Belgium, Germany and the Netherlands.

FIGURE A1

Within-sector effects are the most important contributor to the UK's productivity gap with Belgium in low- and high-wage sectors

Contribution of low-wage sectors to the UK's productivity gap with Belgium (percentage points), 2014

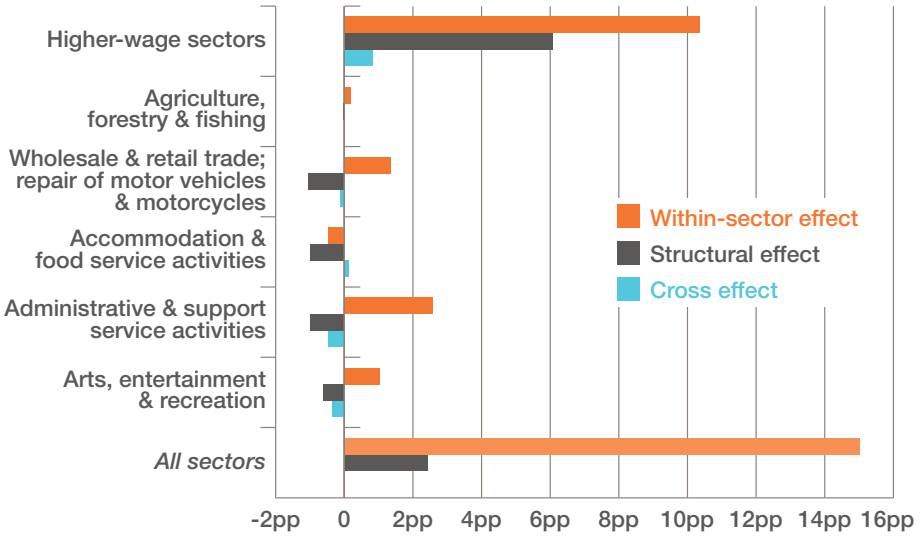


Source: IPPR calculations using Eurostat, 'National Accounts aggregates by industry', (Eurostat 2016a) and Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)

FIGURE A2

Within-sector effects are the most important contributor to the productivity gap with Germany in the low-wage sectors but structural effects are important in the high-wage sectors

Contribution of low-wage sectors to the UK's productivity gap with Germany (percentage points), 2014

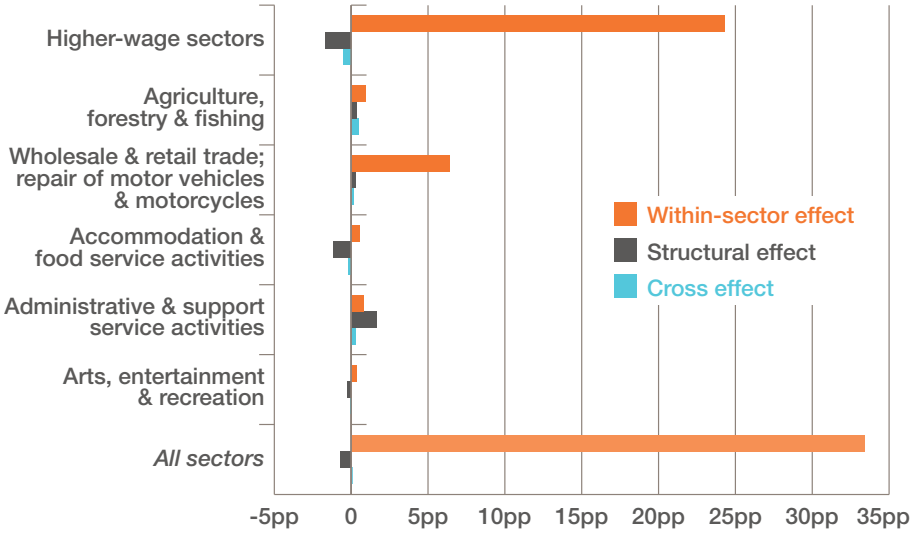


Source: IPPR calculations using Eurostat, 'National Accounts aggregates by industry', (Eurostat 2016a) and Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)

FIGURE A3

The UK's productivity gap with the Netherlands is overwhelmingly explained by within-sector effects

Contribution of low-wage sectors to the UK's productivity gap with the Netherlands (percentage points), 2014



Source: IPPR calculations using Eurostat, 'National Accounts aggregates by industry', (Eurostat 2016a) and Eurostat, 'National Accounts employment data by industry' (Eurostat 2016b)