LLOYDS BANKING GROUP

UNDERSTANDING THE PUZZLE

Helping Britain prosper through productivity growth

NOVEMBER 2016

Produced in association with the Manufacturing Technologies Association

Foreword

Productivity is one of the defining issues of our time.   Its growth is one of the crucial ingredients for an improvement in living standards in any economy – for employment, wages and competitiveness - and yet in recent years, in the UK at least, this growth has proved elusive.

Since the Great Recession productivity has stalled - a matter of huge concern to policy makers and businesses, with ramifications for the whole population.

This report looks at how businesses across the UK view the productivity problem and it examines how they might be able to deal with it and, ultimately, improve their productivity.

Lloyds Banking Group and the Manufacturing Technologies Association (MTA) - which represents the companies that design, manufacture and supply the advanced machinery, software and knowhow that manufacturers deploy to create their products - have worked together to survey more than 1500 businesses across the UK, to try and understand more about the so called productivity puzzle and what need to be done to solve it.

For Lloyds Banking Group, the research is part of its continuous effort to understand the issues its customers are facing, so that it can respond with the support that they need. Through the public commitments made through its Helping Britain Prosper Plan, the Group is leading the way in making Britain's economy more productive, agile and sustainable.

For the MTA the research has provided an insight into how manufacturers are planning to improve their productivity. The key difference that marks out manufacturers is that they are much more likely to be planning to invest in technology, including emerging technologies, than companies in other sectors. This provides them with different – perhaps more pressing - investment challenges. The Report highlights how these challenges may disproportionately affect mid-sized businesses who are likely to be the growth champions of the future.

Encouragingly the report finds that most businesses understand the obstacles to improved productivity - Investment in skills, innovation and new technology. Businesses recognise that it is an issue and they know it needs to be tackled. However, most do not view productivity as a problem for their own business.

This perception of productivity as a problem for the wider economy, rather than individual businesses is an issue that must be addressed.

Dave Atkinson,
UK Head of Manufacturing, Lloyds Banking Group

James Selka,
Chief Executive Officer, Manufacturing Technologies Association

Businesses seem confident that that they have the right plans in place to boost productivity. But the reality is that not enough are investing at the right level - or with the right focus - to ensure that their productivity improves at the pace needed, to ensure that the UK remains able to compete with it global peers.

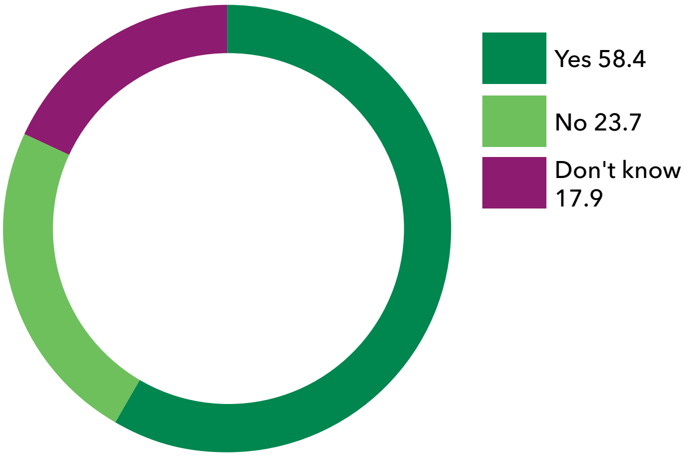
Executive Summary

- Lloyds Bank and the MTA surveyed 1500 British businesses including 300 manufacturers about their views on UK productivity trends. The survey took place between 8-19 July.
- While a majority of respondents think the UK has a productivity problem, they are more positive about their own position. This is because the majority already have a plan in place to tackle the issue.
- The key factors seen as obstacles to faster productivity growth are low skill levels, inadequate investment and a lack of innovation.
- Businesses highlight a more highly skilled labour force as the key thing they are looking for to drive faster productivity growth. A more pro-investment tax system came second in our survey, while manufacturers also gave a particularly high weighting to investment in science and innovation.
- Improving productivity is seen by business as the number one reason to invest. A majority of businesses plan to either raise the amount they invest in boosting productivity over the next 12 months or at least hold it at current levels.
- Uncertain economic conditions were highlighted as the greatest obstacle to investment plans. The cost and availability of finance was also seen as an issue by many medium sized businesses.
- Targets for investment spending are diverse. For manufacturing the number one priority is investment in new machinery, while automation is also a key priority.
- The availability of capital is seen as key to a successful innovation strategy, followed by a good internal R&D source and access to outside ideas.
- Businesses highlighted a wide range of skill shortages. The biggest gaps were seen to be in relatively new areas such as software development and the use of emerging technology. In manufacturing shortages in machine operation skills also stand out.
- The key thing business wants from government is maintenance of stable economic conditions. Lower taxation and reduced regulation were the other factors most frequently cited.
- Mid-sized companies matter to the UK economy despite the focus normally put on SMEs and the survey suggests that while the economic situation is the main challenge, these companies are the most likely to experience the cost and availability of finance as a barrier to investment.

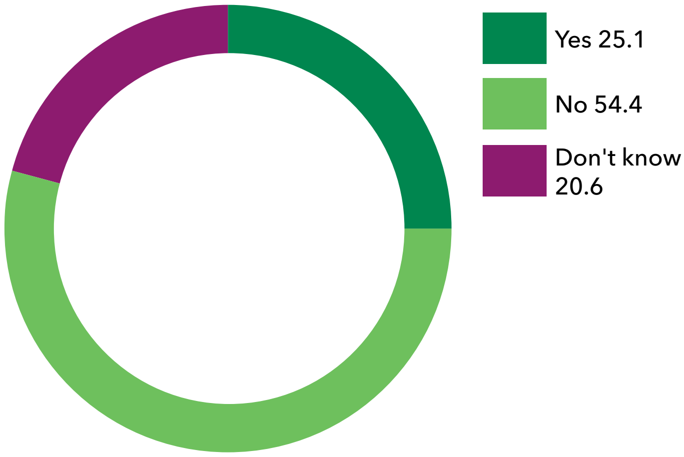
UK PRODUCTIVITY: A SURVEY OF BRITISH BUSINESS

Businesses recognise that productivity is a problem

Is productivity growth a problem for the UK Economy?



Is productivity growth a problem for your business?



Sluggish productivity growth is often highlighted as a key problem for the economy by economists but is this a view that businesses share?

Our survey suggests that most UK companies think the UK has a productivity problem. Just over 58% answered yes, while a further 18% were unsure, leaving only 24% who do not regard it as an issue. Looking at just the manufacturing sector produces a similar result. Just under 59% of manufacturing companies agree that productivity is a problem for the UK economy, while a further 19% 'don't know'. This left only 22% of respondents who claim to be unconcerned.

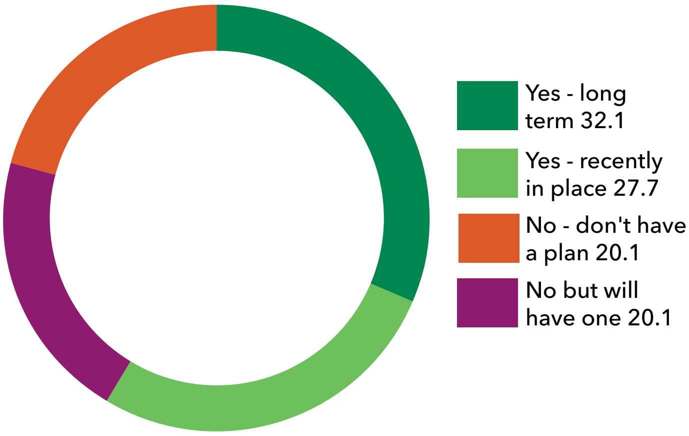
The rest of the survey goes on to identify whether businesses see productivity as a problem for their own company and whether they are taking any measures to address this.

Despite their concerns about productivity growth in the economy as a whole the majority of respondents do not see it as a problem within their own businesses. Close to 55% of respondents answered 'no' to this question with a further 20% in the 'don't know' category. This means only 25% of respondents see productivity as an internal problem. The situation is similar for manufacturing where close to 54% feel they have no problem and only about 28% report that productivity is an issue for their business.

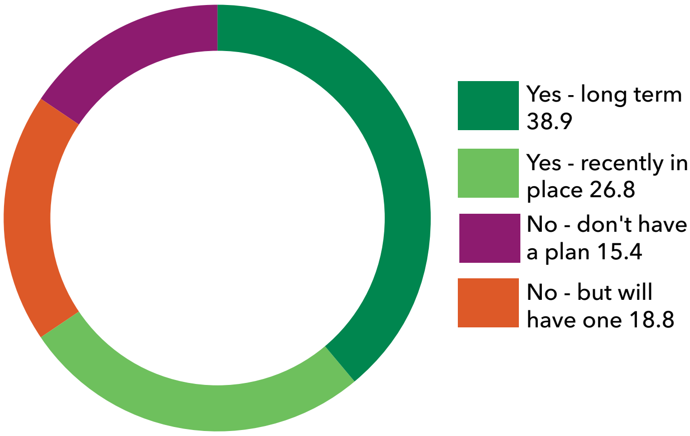
What accounts for this distinction between concern at the macro level alongside a lack of angst about the position of their own business? The next question suggests that the answer is that businesses think they have a plan.

But most companies have a plan in place

Do you have a plan in place to improve your productivity? - All Industries



Do you have a plan in place to improve your productivity? - Manufacturing



Most businesses claim to have a plan in place to address their own productivity issues. Close to 60% of all respondents say that they already have a plan for productivity growth that has either been in place long-term (32% of businesses) or has been implemented more recently (28%).

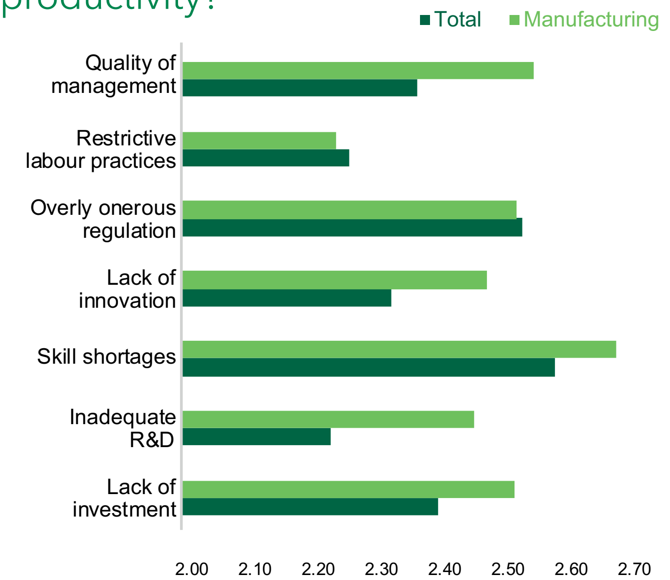
A further 20% of businesses stated that they intend to put a plan in place. This strongly suggests that productivity is an issue that most businesses think about but also one which they feel that they are already addressing.

Here we see a difference in the response from manufacturing companies with an even larger proportion of manufacturers (almost 66%) claiming to already have a productivity plan in place. A further 19% of businesses stated that they intend to put a plan in place.

An important question to consider is whether businesses are right to think that they have already addressed the issue? Are they in reality taking the right steps and are these adequate? To look at this we first asked businesses to diagnose the problem. What do they consider the key obstacles to productivity growth and what needs to be done to remove them?

Key issues highlighted are skills, investment and innovation

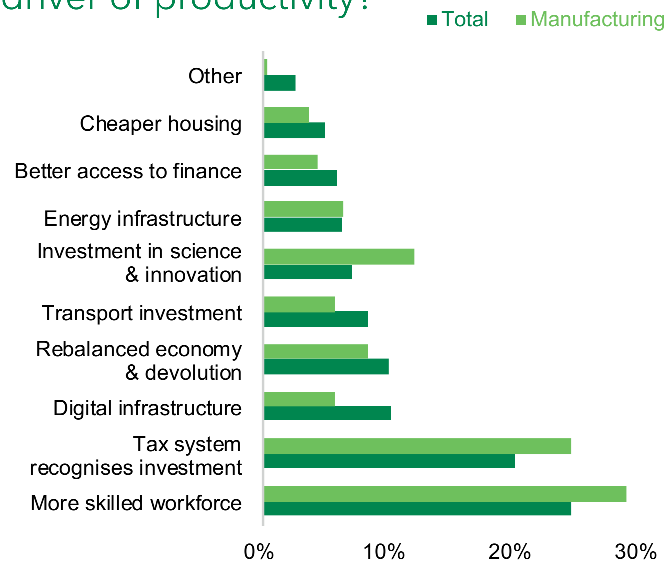
What are the key obstacles to improving productivity?



The survey, represented on the graph above with an x axis showing the average weight of importance assigned to obstacles by the companies, highlights four factors that businesses regard as accounting for poor productivity growth - the quality of the labour force; inadequate investment; a lack of innovation and onerous regulation. It should be noted that these are areas that are also often highlighted by economists who have looked at the productivity question. Manufacturers in particular see labour quality as a major obstacle with skill shortages and concerns about the quality of management cited first and second in the survey. A lack of investment is also seen as a significant issue particularly by manufacturers, as is a lack of innovation. For businesses as a whole, skill shortages are seen as the number one issue with overly onerous regulation also highlighted as a major concern.

An important distinction here is that some of these obstacles can be addressed by businesses themselves, some are issues for government and some can be solved best by co-operation between the two. This is brought out in the response to the next question which asks businesses about the drivers of productivity.

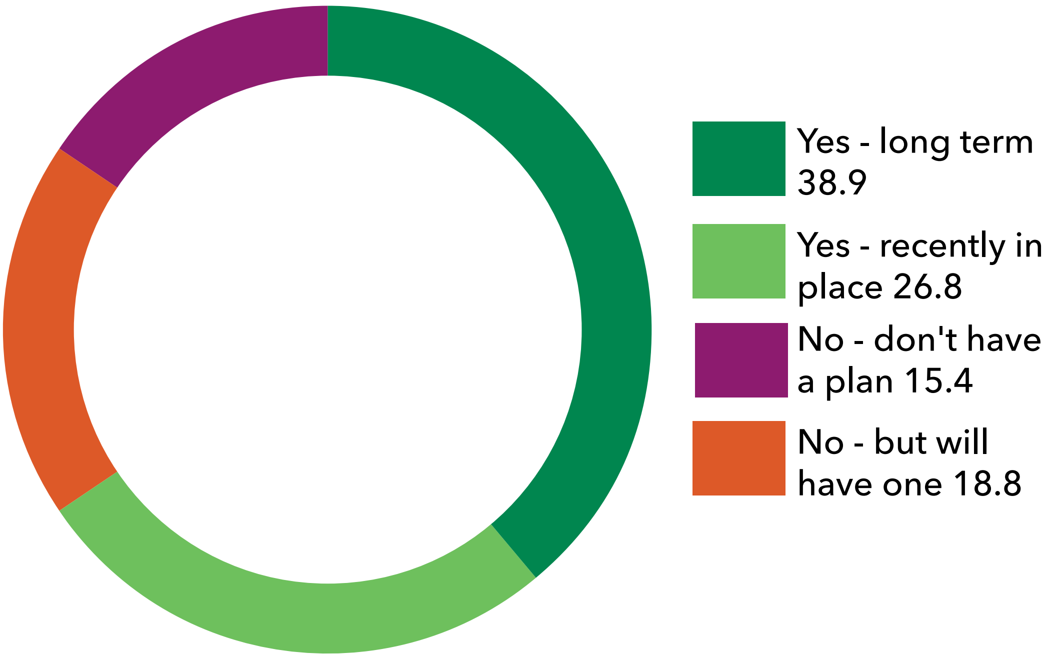
What is the most important potential driver of productivity?



Respondents highlighted improvements to skills, investment and innovation as the key things that are likely to help improve productivity. A more highly skilled workforce was seen as the single biggest driver with 25% of all respondents and close to 30% of manufacturers highlighting this area. A pro-investment tax system is highlighted as the second most important factor both by business as a whole and by manufacturers. Investment in infrastructure is also highlighted, with digital infrastructure the third most important response for all companies. However the manufacturers in the survey put investment in science and innovation ahead of digital infrastructure, highlighting the importance of technological developments in improving productivity.

The next part of the survey looks in more detail at investment, innovation and skills.

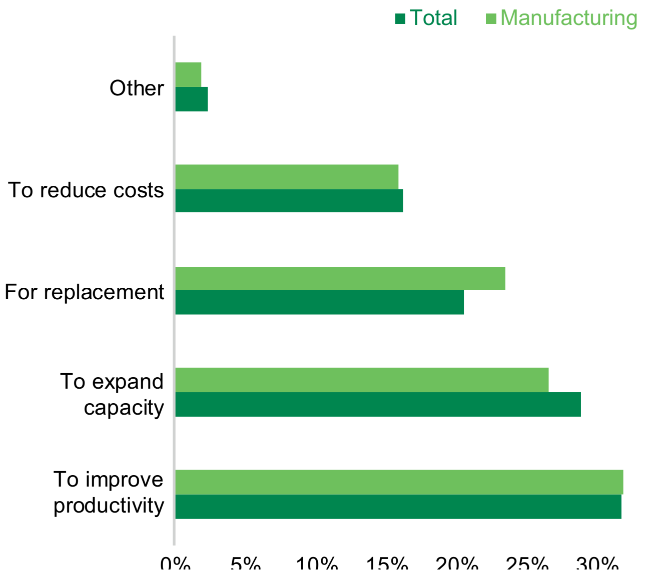
Do you have a plan in place to improve your productivity?



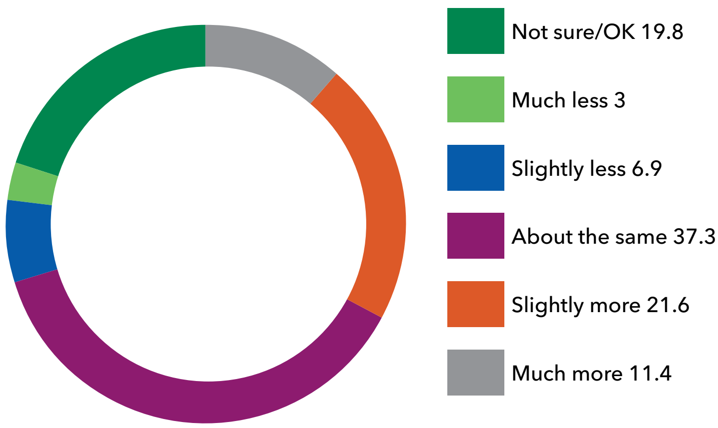
Manufacturing

Investment plans holding up for now...

What will be the main purpose of your investment?



Amount you plan to invest to improve productivity compared to past 12 months



Investment seems to be a key part of businesses' productivity plans. Improving their productivity is highlighted as the primary reason to invest by just over 30% of all businesses and manufacturers. Expanding capacity is cited as the next most important reason to invest followed by replacing existing capital. It seems particularly fortunate at the moment that productivity improvement is a priority in capital spending plans as the indication from business is that the uncertain economic conditions in the wake of the EU referendum vote may force them to make some cutbacks in their overall spending plans.

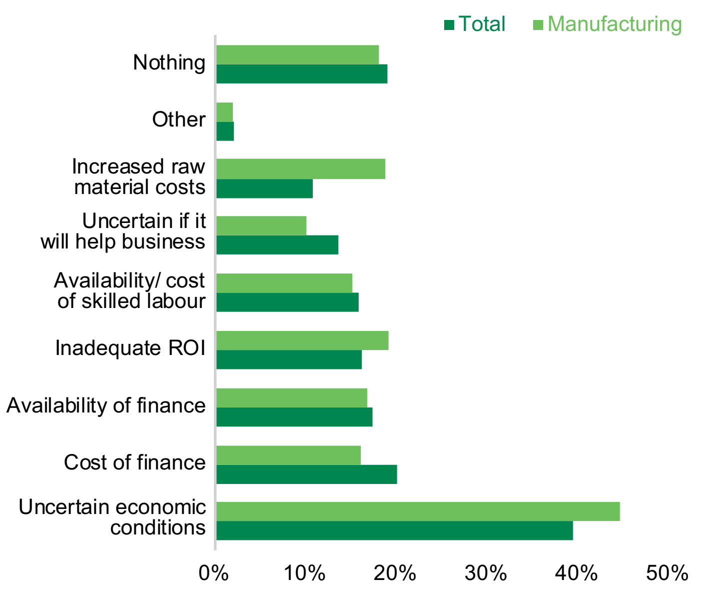
It is notable that recent surveys from the Engineering Employers Federation (EEF), the Confederation of British Industry (CBI) and the British Chamber of Commerce (BCC) all suggest that business may make cutbacks to their investment plans in the light of recent developments.

For now at least, however, investment to boost productivity is expected to hold up relatively well. 41% of all respondents who expressed an opinion plan to raise the amount they invest in improving productivity over the next 12 months, while about another 47% intend to keep the amount unchanged. Only 12% of businesses think that it is likely that they will make cutbacks in this area. Overall, we see similar percentages for manufacturers with a balance of +27%, but this hides a significant variation between different sizes of company; the percentage balance ranges from +20% for companies with a turnover of £5-24.9m to +39% for the next size up (£25-99.9m), with the small companies (turnover under £5m) also above the overall average at +32%.

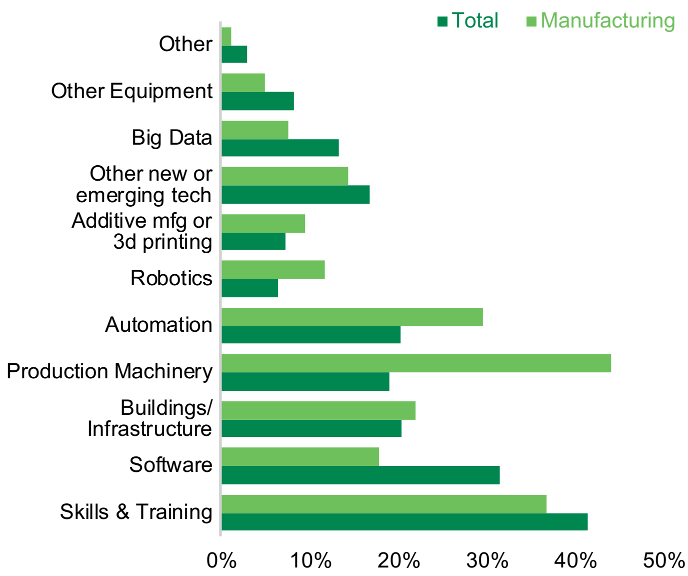
This is an extremely positive indication of the corporate sector's commitment to improving productivity. Nevertheless, given the high degree of uncertainty about current economic conditions, there must be a risk that actual spending falls short of these plans.

But may be impacted by economic uncertainty…

Factors preventing investment over the next twelve months



What areas are you targeting for investment?



The most frequent factor highlighted as likely to prevent investment is uncertain economic conditions given the timing of the survey. Around 40% of all businesses and close to 45% of manufacturers noted this as the largest single risk to investment plans. No other single factor stands out in the results for all companies.

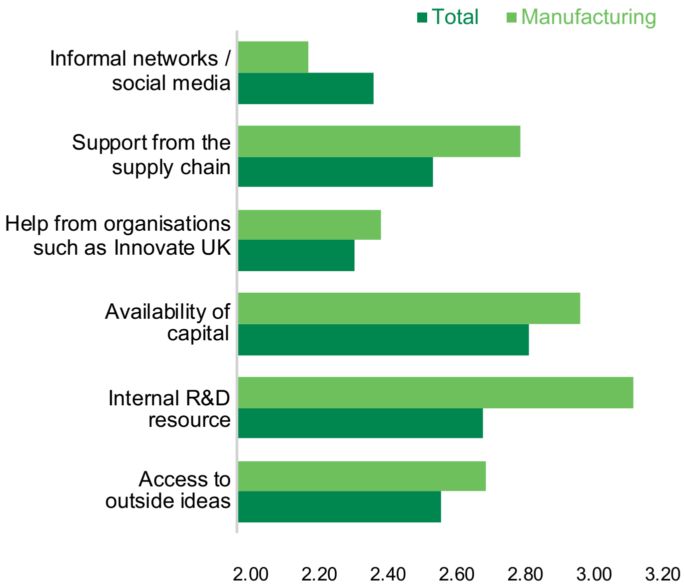
However, the results when looked at by size of company suggest that the importance of both cost and availability of finance varies by company size. We will return to this factor later in the report. The relatively high weighting given to concerns about rising raw material costs, particularly for manufacturing probably reflects at least in part the potential impact of the recent depreciation in sterling.

Targets for investment spending are relatively diverse. For manufacturing the number one priority is investment in machinery, while automation (a related application) is also important. This could be seen as continuation of the trend in recent years of productivity enhancement through increasing companies' levels of technological sophistication.

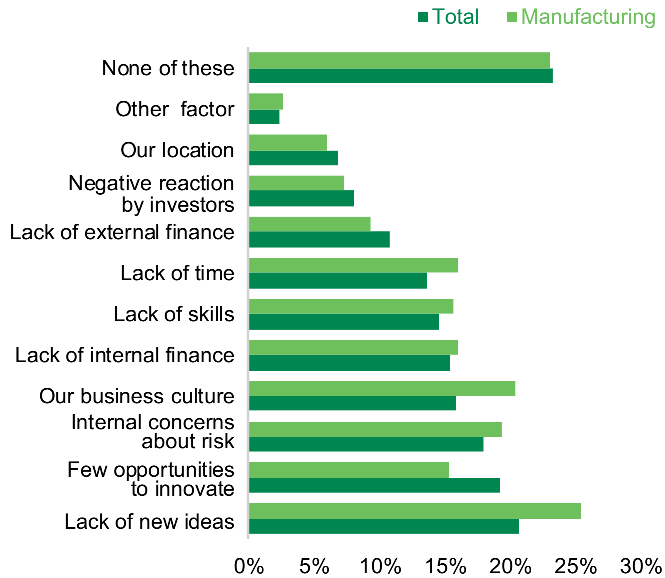
In contrast, in other parts of the economy where it may be harder to introduce such measures the emphasis seems to be on enhancing skills and training and on developing new software.

Support for research could help boost innovation

How important are the following factors for innovation?



What factors have held back innovation?



A number of factors were highlighted as being integral to driving innovation. For businesses as a whole the availability of capital is seen as most important for a successful innovation strategy, followed by a robust internal R&D resource and good access to outside ideas. In the case of manufacturing, a good internal R&D resource is seen as the most important factor but the availability of finance and of sources of external ideas are also clearly regarded as highly significant.

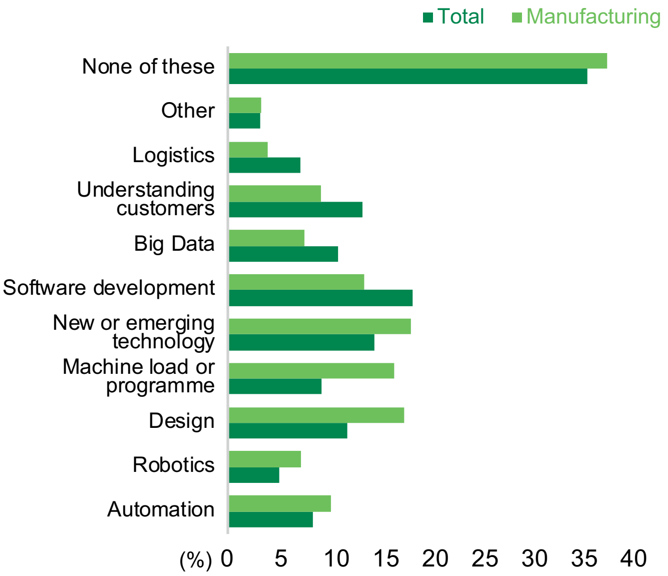
The graph above represents the average weight of importance assigned by companies that participated in the survey to factors that relate to innovation. Manufacturers notably also put a high weighting on good support from their supply chain, which probably reflects the complexity and inter-reliance of modern manufacturing.

A lack of ideas stands out as the biggest single obstacle to successful innovation. This reinforces the results of the previous question that access to both internal R&D and good external ideas are vital for driving successful innovation. It also suggests that policies that encourage links with academia or other research institutions would be a key aid to industry. The other reasons cited, including a 'lack of opportunities', 'internal concerns about risk' and 'our business culture', all point to the importance of a firm's commitment to an innovation policy.

Overall the key message here seems to be that a commitment to support for both internal and external research is vital for driving innovation.

Business looks for government to provide stability

Where is a skills shortage restricting investment?

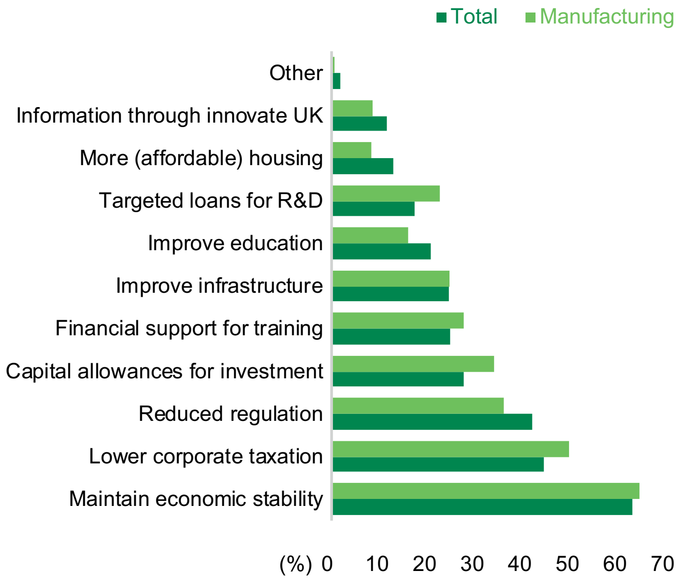


Answers to a number of questions highlight concerns about skill shortages as a key issue for business. This question looks in more detail at which areas in particular are being affected. For all businesses the greatest shortages can be seen in relatively new areas such as software development and use of emerging technology. In the case of manufacturing these areas were also highlighted but shortages in machine operation skills also stand out.

These shortages raise a number of questions - do they reflect problems with the recruitment policy of business or a general lack of availability of the right sort of candidate? If the latter is more prevalent this highlights issues within the UK education system - is the system failing to turn out potential workers with the right skill sets? If so are there issues to be addressed at university level or do they mostly occur in the earlier years of education? Finally who should be primarily responsible for addressing these perceived skill shortages within the workforce? Is it something that business needs to be at the forefront of addressing or should they expect to be given a lead by government?

We believe that the answers to this question emphasise the need for business and government to be in agreement on apprenticeships and other key training issues. In particular there is a real need for business to be aware of the impact of the new apprenticeship levy.

Which government action would be useful to boost productivity?



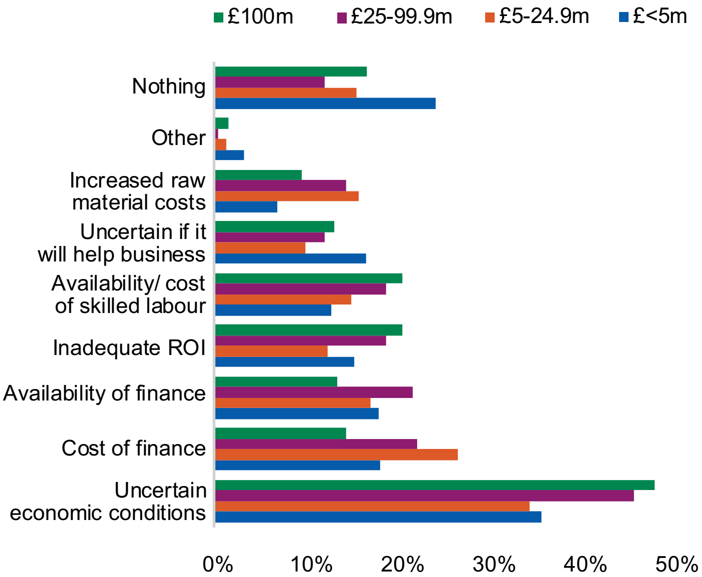
The final part of the survey looked at what business wants from the government. The respondents think that by far the biggest single contribution the government can make to boosting productivity is to maintain economic stability. The very high weighting on this will probably be at least in part due to the close proximity of the EU referendum result. However, the result is not dissimilar to surveys by other organisations, which suggest that businesses usually regard this as the primary action they want from government. The other factors that score particularly highly are lower taxation and reduced regulation.

The calls for lower taxation and higher capital allowances for investment - coupled with the responses which highlight issues with internal capital and external finance - suggest that a lack of funding is seen as a constraint for many firms.

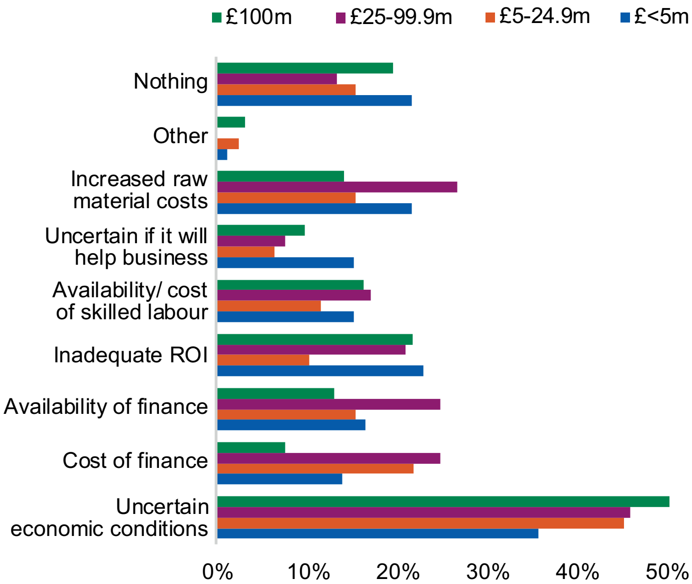
ANALYSIS BY SIZE OF FIRM

Mid-size manufacturers differ in their view of barriers to investment

What factors might prevent you from undertaking any investment in the next 12 months? - All industries



What factors might prevent you from undertaking any investment in the next 12 months? - Manufacturing



Britain's mid-sized companies are an under-appreciated asset to the national economy. High profile public companies are seldom out of the public eye and start-ups and small businesses are the darlings of politicians of all shades but the potential of medium sized businesses to help the UK grow can all too easily pass under the radar. But less that 2% of these companies contribute a quarter of sales and a fifth of jobs – so they matter.

They are also very likely to be growth orientated and to export. While they face many of the same challenges as their larger and smaller counterparts, there are also issues which are more characteristic to them. One such issue is the availability of external finance. This survey data demonstrates that, while the overall economic situation continues to be the most significant potential break on investment, these key companies are the most likely to cite the cost and availability of finance as a barrier.

It was highlighted earlier that manufacturers are more likely than most sectors (only the Public Sector had a higher percentage on this question) to be affected by the current economic uncertainty and manufacturers are also more likely to report an inadequate return as a block on investment, but they see the cost of finance as less of an issue.

However, breaking this down by size of company (based on turnover), we see some interesting data about mid-size manufacturing companies who appear to be facing these issues differently.

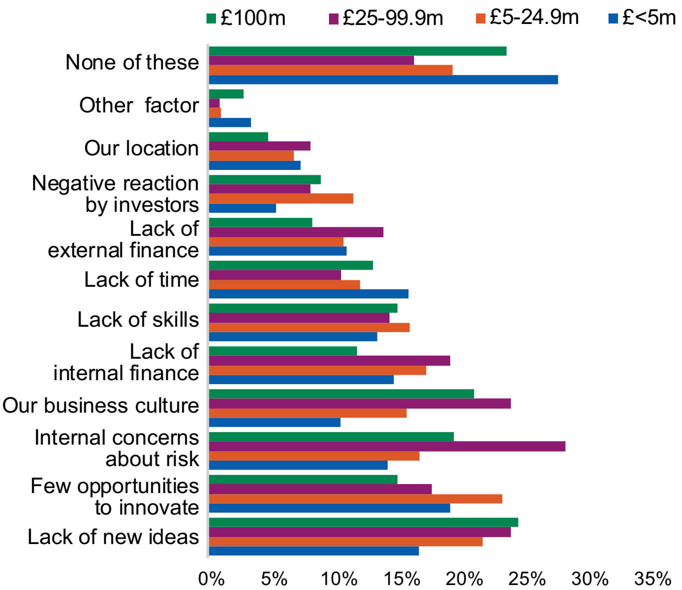
The importance of this chart is in the variation it shows between the turnover bands. It seems that companies with turnover in the range "£25-99.9m" (upper mid-size) are more likely than others to be concerned about the availability of finance and, along with the "£5-24.9m" (lower mid-size), the cost of that finance.

It is also worth noting that the largest manufacturers have significantly less of a problem with the cost of finance – one possible explanation for this may be that they have easier access to financial markets - and are also the lowest reporting group for concerns about availability of finance. This suggests that while the much discussed cash piles on which businesses are said to be sitting are real, it would seem they are overwhelmingly concentrated in the accounts of large companies.

Analysis by size of firm

Upper mid-size companies' innovation affected by internal issues

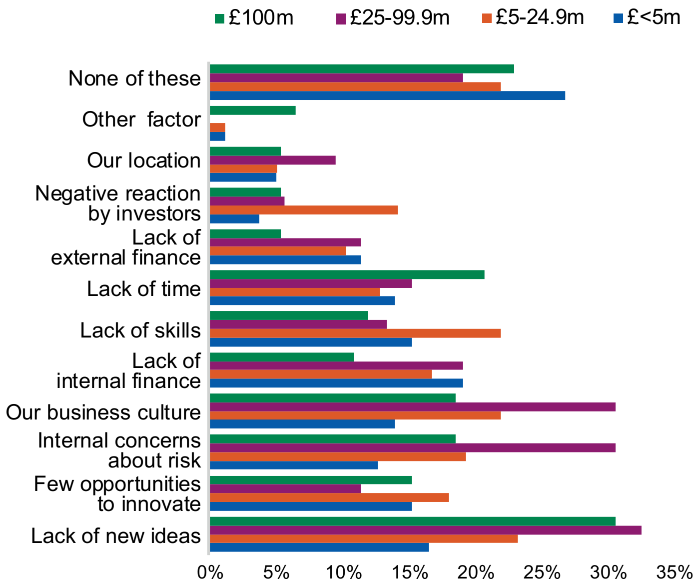
What factors have held back innovation in your business? - All industries



Upper mid-sized companies across all industries think that "internal concerns about risk taking" impact on them more than the other sized companies. They, along with the largest companies, also think that their business culture has a bigger impact than is the case for the smaller companies. As might be expected, the smallest companies seem to be the most nimble as they have the lowest reporting of a "lack of ideas" as a barrier to innovation.

However, if we look just at the manufacturing companies, we see some subtle but nevertheless important differences.

What factors have held back innovation in your business? - Manufacturing



The upper mid-size companies stand out in terms of both concerns about risk and their business culture as barriers to innovation, while the two largest bands are more concerned than smaller companies about the lack of new ideas.

This also links back to an earlier question (see page 8) which identified that manufacturing companies considered that the quality of management was blocking productivity growth. Although we have not included the chart, the breakdown of this issue by turnover shows that this is particularly seen in upper mid-size companies. This band also noted more general skill shortages as a constraint on productivity growth.

APPENDIX

This introduction supplies answers to some of the questions that are often asked about productivity, which will help you to better understand the report.

What is productivity? – It's about working smarter!

Productivity is a measure of the amount of output being delivered per units of inputs. Businesses produce goods and services by combining labour and capital to turn raw materials into a final product. They can increase this production either by adding to these inputs or by using these inputs more efficiently. To give a simple example a car company can produce more cars by hiring more workers, by working their existing workers for longer hours or by making them more efficient. In a nutshell you can work harder, longer or smarter. Productivity is about working smarter.

Productivity can be measured in a number of ways. One way is to look at the amount of output produced per worker or per hour worked. The UK Office for National Statistics (ONS) publishes quarterly updates of both these measures for the economy as a whole and for some sectors including manufacturing.

An alternative method is to look at what is called total factor productivity. This is the proportion of output growth that is not explained by the change in all inputs used in production i.e. labour and capital. It can be seen as the purest measure of working smarter.

Why is it important?

Nobel winning economist Paul Krugman once wrote that "productivity isn't everything, but in the long run it is almost everything. A country's ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker." For much of human history productivity growth was negligible and as a result living standards for most people saw little or no growth. The coming of the industrial revolution brought inventions, innovations and ideas that resulted in a sharp rise in productivity growth that eventually translated into rapid improvements in living standards.

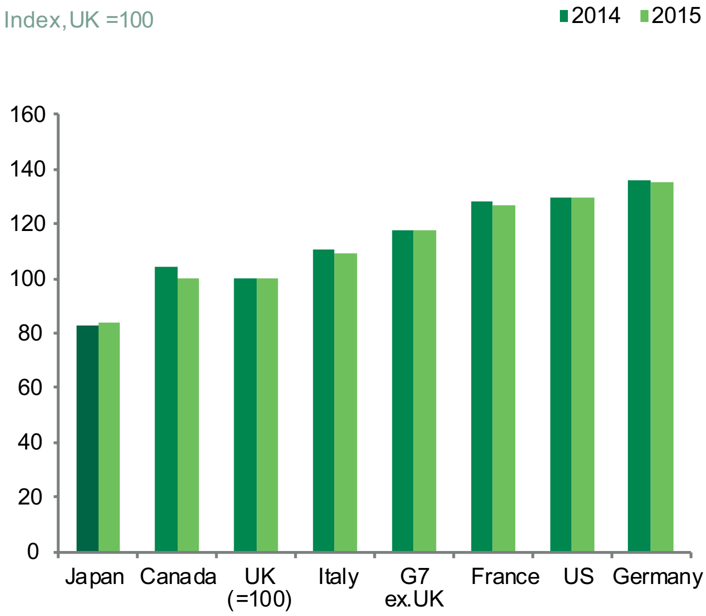
Recent years, however, have seen a slowdown in productivity growth and since the 2008/09 global recession productivity growth has stagnated not only in the UK but in many countries. In response most peoples' living standards have stagnated or in many cases even declined. A sustained solution to this that allows more rapid growth in both average real wages and profits requires a rebound in productivity.

What does UK productivity performance look like?

UK productivity performance can be measured either against that of other countries or against its own history. On both criteria the recent trend has been disappointing.

Chart 1 shows calculations by the ONS of the difference in the level of whole economy productivity between the UK and its G7 peers (the measure used is output per hour worked and the last data currently available is for 2014). The level of whole economy productivity in the UK is considerably below the G7 average and the gap has widened modestly. The picture for manufacturing sector is more positive as the productivity gap between the UK and its peers has narrowed. However, the level of UK productivity is still below the G7 average.

Chart 1: International comparisons of productivity

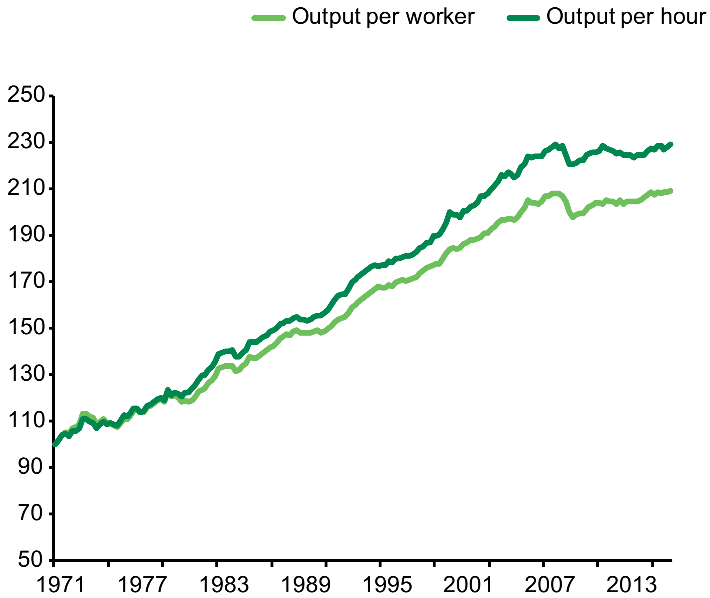


Source: ONS (1/11/16)

What does UK productivity performance look like?

Chart 2 shows ONS estimates of productivity growth over recent decades. The chart demonstrates that productivity fell sharply during the 2008/09 recession and has subsequently failed to return to its previous growth trend. This sustained slowdown in productivity, which has been seen in almost all developed economies, has been called the 'productivity puzzle'. There is still no consensus on its cause but engineering a reacceleration is a priority for economic policymakers.

Chart 2: UK historical productivity performance



Source: ONS & Lloyds Bank CB calculations (1/11/16)

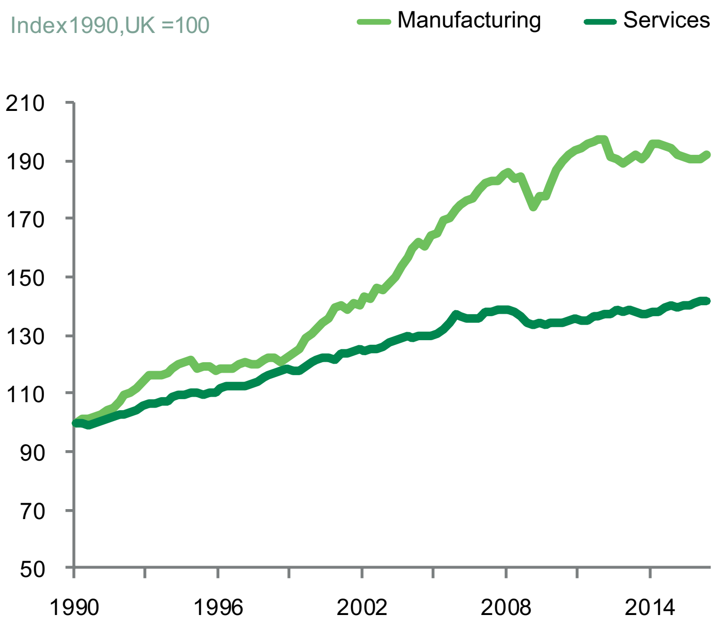
What does UK productivity performance look like?

UK productivity varies significantly by sector. Chart 3 shows ONS estimates for productivity growth in manufacturing and services, with the former significantly outpacing the latter.

The outperformance of manufacturing is at least partly due to a policy of substituting capital for labour, which has changed the makeup and size of the manufacturing labour force. In contrast many services tend to be more highly labour intensive.

In summary the UK's productivity record on any measure does not look particularly positive. The level of productivity has generally been below that of its international peers and there has been little sign of a narrowing of the gap in recent years. Moreover, UK productivity growth has slowed significantly since the recession of 2008/2009. There have been some more positive signs in manufacturing but overall the verdict has to be could do better.

Chart 3: UK productivity performance by sector



Source: ONS & Lloyds Bank CB calculations (1/11/16)

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