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People-powered innovation

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People-powered innovation

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Summary and recommendations

Innovation is about new and better ways of doing things

All the richest economies have seen a productivity slowdown since the financial crisis, thought to be due primarily to weakness in diffusing innovation. However, the extent of that slowdown has been greatest in the UK. There is significant potential to increase productivity in all industries if more low-productivity firms could be brought towards the average. Policies to support innovation adoption are key to unlocking these gains.

The UK's (relative) innovation strengths are its scientific research and its universities, which combine in the production of highly qualified people. Its (relative) weaknesses are low investment and the diffusion of innovation from the knowledge frontier to the great majority of firms.

Workforce issues central but frequently neglected in policy discussions

Firms often look to their employees for ideas on how to do things better. About 60% of employees say they make innovative suggestions to improve the quality of their team. How employees are managed, though, can make a difference:

- Better-managed firms typically do more research and development (R&D), get more returns from that spend, and are more likely to be adopting new technology (such as artificial intelligence (AI)).
- Despite the worries, remote and hybrid working aren't incompatible with innovation.
- Innovation can be designed into jobs likewise for jobs that offer a degree of discretion or autonomy.
- Engaged employees are more likely to come forward with ideas. But employees often 'sit on their hands' when disengaged or when they think they are not being listened to.
- At any time, about a tenth of UK businesses are changing the way they organise work. However, adoption of high-performance working practices (workplace innovation) is well behind leaders in the field (Sweden, Finland, Denmark) and may, if anything, be falling.

Clear link between innovation and workforce skills

The proportion of the workforce that is highly qualified (graduate or better) continues to increase but there are concerns about the financial sustainability of higher education.

Public funding of further education and apprenticeships has fallen greatly since 2010, alongside a reduction of over a quarter in employer spend on training. The Apprenticeship Levy may have distorted patterns of apprenticeship provision (away from young people, towards higher-level apprenticeships that 'cannibalise' existing training).

UK needs innovation strategy alongside industrial strategy

This should cater for the needs of the 'everyday economy', rather than high-tech R&D-intensive industries that employ few people. It will require considerable coordination across Whitehall departments and across layers of government (central, local and devolved governments).

The multi-year spending review is an opportunity to assess the affordability of plans to keep spending more and more on R&D, or ambitions to be a 'science and technology superpower'.

Innovation policy has become increasingly unbalanced. Public funding of R&D was little affected by austerity, unlike other areas of innovation-related spending. And over the last decade, the cost to the taxpayer of innovation-related tax breaks (R&D tax credits, the Patent Box) has

soared. The UK spends more of its income on R&D tax credits than any other rich country. However, it seems that hundreds of millions - if not billions - may have been wasted through error or fraud.

For all but the most sophisticated businesses, improving management and adoption of (existing) technology are the main barriers to improvement, innovation and growth. Government assistance to smaller firms - the Help to Grow schemes - have failed to engage enough businesses to make a difference.

Current assistance appears fragmented. The spending review is an opportunity to review and (possibly) rationalise, although this may be difficult given the shift from local enterprise partnerships (LEPs) towards local authorities within England.

Employee relations built on trust can unleash workplace innovation

Stronger partnerships between employers and employees at the sector level can enhance working practices within sectors, complementing efforts focused on individual firms.

More effective and better resourced labour market enforcement bodies can support workplace innovation by advising employers how to improve their people management practices.

Employee morale is an especially important prerequisite for public sector innovation. Strengthening line management may be critical.

Adoption of technology to transform public services may involve workforce issues as great as any in the private sector.

Policy recommendations

- 1 Update the UK's innovation strategy with a much stronger focus on boosting innovation adoption across the economy while continuing to support the country's strengths in 'cutting-edge' R&D and science-based innovation.
- 2 Maintain effective scrutiny of claims for the R&D tax credit. Reverse the increase to the subsidy rate announced in the Autumn Statement 2023.
- 3 Abolish the Patent Box.
- 4 Review business support services with a view to developing a cost-effective, accessible business support service that can provide bespoke, high-quality advice to SMEs on the capabilities needed to boost innovation and growth.
- 5 Establish a £50 million sector-based social partnership fund which sector bodies could bid for to improve their ability to support partnership working and collective action to improve management capability, skills development and technology adoption.
- 6 Double the Acas budget from £60 million to £120 million a year to enable it to further develop its people management advisory services to support employer compliance as part of a more progressive labour market enforcement system.
- 7 Set up and fund a limited number of 'workforce productivity pilots' to develop innovative approaches to public sector people management and technology adoption that improve efficiency and effectiveness.

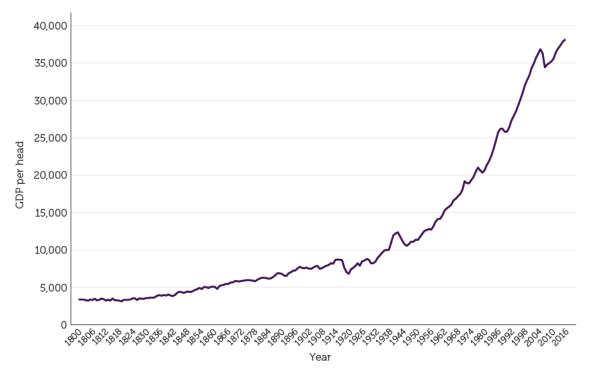
Introduction

A very simple definition of innovation was given by the (independent) Regulatory Horizons Council (RHC): "innovation is about finding new and better ways of doing things". It is "a continuous and iterative process, where ideas become practical reality, and real-world challenges and opportunities spark new ideas. At its pinnacle, innovation is the process by which things we did not know could exist, let alone were needed, become things we cannot live without." However, for many small firms, the dividing line between innovation and general business improvement can seem arbitrary.

<u>Innovation</u> was responsible for the 'Great Enrichment', whereby countries such as the UK have seen living standards increase at least tenfold since 1800 (Figure 1).

Figure 1: The Great Enrichment, 1800-2016

(UK, GDP per head, US \$, 2011 prices)

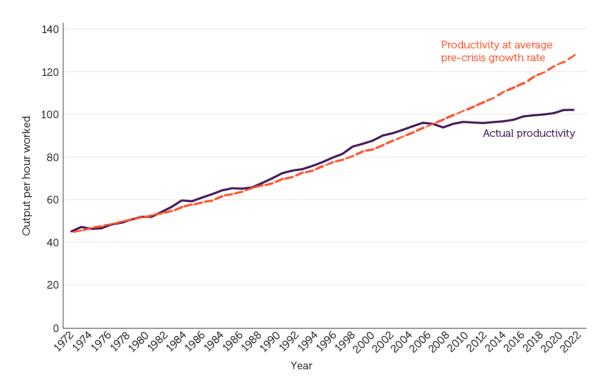


Source: Maddison project database.

But the UK has seen a marked productivity slowdown since the global financial crisis. Productivity is almost a quarter less than it would have been if pre-crisis trends had been maintained (Figure 2).

Figure 2: The UK productivity slowdown since 2007

(UK, output per hour worked, 2019=100)

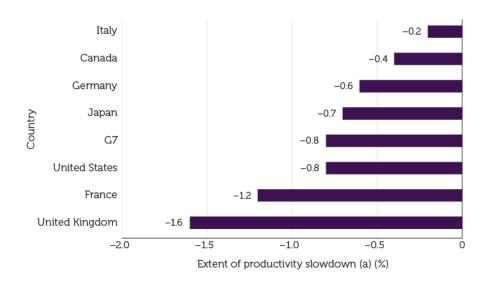


Source: Office for National Statistics (ONS).

All the richest major economies have seen a productivity slowdown. However, the extent of the slowdown has been greatest in the UK (Figure 3).

Figure 3: Productivity slowdowns across the G7

(GDP per hour worked, PPP adjusted, constant prices)



(a) Average annual growth rate 2008-22 minus average annual growth rate 1995-2007.

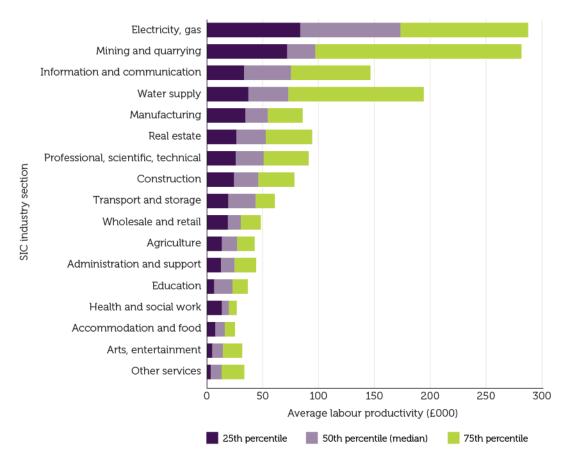
Source: Organisation for Economic Co-operation and Development (OECD).

The <u>OECD productivity study</u> saw this slowdown being primarily due to "a breakdown of the [innovation] diffusion machine" (confirmed by an <u>analysis of the UK data</u>).

Productivity disparities exist in all industries in the UK (Figure 4). For example, in accommodation and food, the labour productivity of the median firm was £16,000. But this was twice as much as that of firms at the 25th percentile (just £8,000) and much less than firms at the 75th percentile (£25,000).

Figure 4: Productivity dispersion in UK industries, 2021

(UK, private non-financial business economy, 2019 prices, employment-weighted)



Source: Office for National Statistics (ONS).

This means there is significant potential to increase productivity in all industries if more low-productivity firms could be brought towards the average. Innovation diffusion (learning about and applying new technology and ways of doing things) is crucial if these low-productivity firms are to improve.

Innovation is an inherently *social* process that relies greatly on the knowledge and enthusiasm of the workforce. UK innovation policy has neglected this aspect. We need less emphasis on R&D and generating new ideas, and more emphasis on the take-up of existing innovations within the workplace.

The context in which innovation takes place is also continually changing.

Population ageing is a consequence of past innovations that have lengthened life expectancy and helped slash the fertility rate. The number of people in the UK aged 65 and over is expected to double between 2000 and 2050 (Figure 5).

Year

Figure 5: Population ageing in the UK, 2000-50

Source: OECD.

Under 15

From 15 to 64 years

An older population raises (relative) demand for goods and services that meet the needs of older people, and hence the (relative) payoff for innovations in that area. And it increases the pressures for innovation in healthcare (although, as the <u>Office for Budget Responsibility</u> notes, innovation in healthcare often increases, rather than reduces, costs).

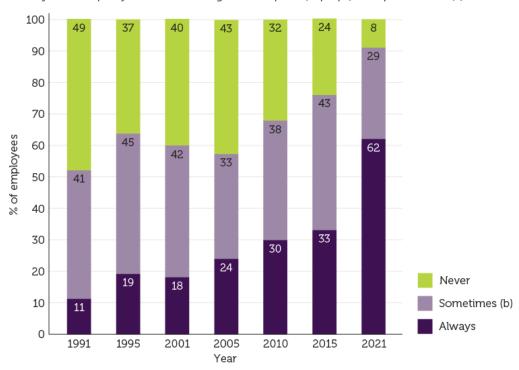
64 years or over

The proportion of the population of 'working age' will decline, heightening the incentive to replace human labour by technology (as well as increasing the labour force through migration and encouraging people to work for longer).

The **technological content of jobs is increasing**. In 1991, nearly half of employees said their work didn't involve computers at all. Thirty years later, the proportion was fewer than one tenth (Figure 6).

Figure 6: Use of computers and similar technology at work, 1991-2021

(UK, employees only)



"Does your main paid job involve working with computers, laptops, smartphones etc?" (a)

- (a) 'Tablet' was added in 2021.
- (b) The precise frequency descriptors varied between surveys. This category includes everyone who gave answers between 'always' and 'never'.

Source: European Working Conditions Surveys.

While the 2021 data may overstate the extent to which jobs today involve technology, it is nevertheless clear that the workforce is increasingly technology-literate and technology-dependent.¹

UK innovation performance

Innovation is complex and highly context dependent. Nevertheless, considerable efforts have been made to develop comparable measures and measurement tools, set out in international guidance (the Oslo Manual).

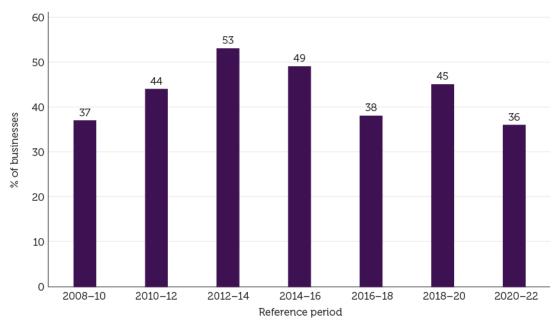
According to the 2023 <u>UK Innovation Survey</u>, 36% of businesses with 10 or more employees were 'innovation active' during the three-year reference period. The figure moves around but this was a lower proportion than the middle years of the last decade (Figure 7). The proportion *may* be low because of COVID-related factors.²

¹ Due to COVID-19, the 2020 survey was delayed and became online only.

² Immediately, there was the distraction of keeping businesses going during COVID-19. There may also be longer-term consequences because of lower investment, as explored by the <u>Economics Observatory</u>.

Figure 7: Innovation active businesses

(UK, businesses with 10 or more employees)



Source: **UK Innovation Survey.**

At any time, most businesses don't get involved in innovation. This is often because they don't see any need for it.

When comparing countries, the focus tends to be on how well they turn innovation inputs into innovation outputs. These assessments score the UK highly, albeit with areas of (relative) strength and (relative) weakness.

The World Intellectual Property Organization's <u>2023 Global Innovation Index</u> placed the UK fourth behind Switzerland, Sweden and the US.

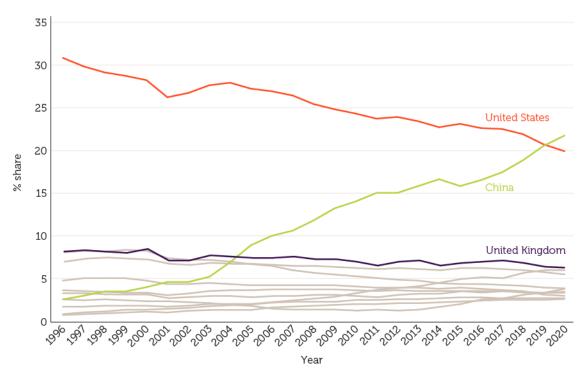
The European Commission's <u>2024 European Innovation Scoreboard</u> said the UK was a 'strong innovator' with overall performance nearly 15% above the EU average (although the gap has almost halved since 2019).

Strengths

The quantity and quality of UK scientific research is a strength, at least when measured using scientific publications (although this data has been criticised for <u>underplaying the impact of novel, ground-breaking research</u>). According to the <u>latest official analysis</u>, which ran to 2020, the UK was third behind China and the US for publication of scientific papers (Figure 8).

Figure 8: Quantity of UK science

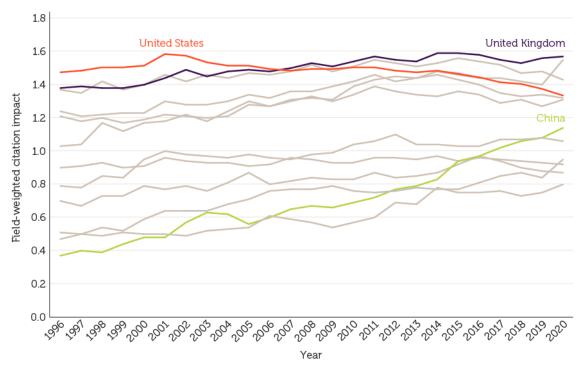
(UK, share of world's scientific publications)



Source: International comparison of the UK research base, 2022.

The UK's share of the global total is falling slightly as China's research activity increases. However, the quality of UK science, as measured by citations, is high and appears to be either steady or gradually improving (Figure 9).

Figure 9: Quality of UK science



Source: International comparison of the UK research base, 2022.

It is difficult to say how much this benefits the UK. <u>Studies</u> estimate high rates of return from this type of expenditure. Returns, however, are highly variable and difficult to predict in advance (indeed, they are often difficult to measure even afterwards).

The UK also has a disproportionate number of **top-class universities**. Four of the top 10 universities in the world are in the UK (Oxford, Cambridge, Imperial College and University College London). Fifteen of the top 100 are in the UK, second only to the US (Figure 10).

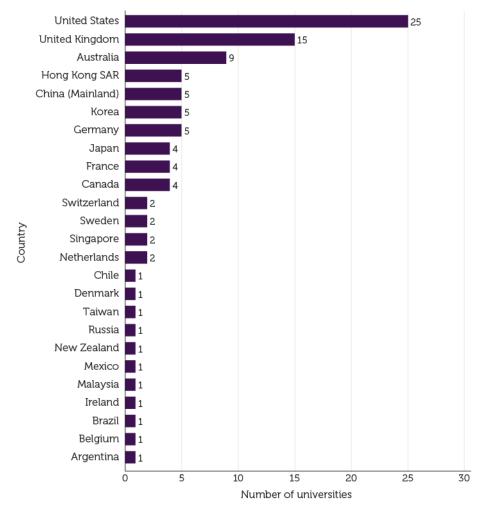


Figure 10: Home country of world's top 100 universities

Source: QS world university rankings 2025.

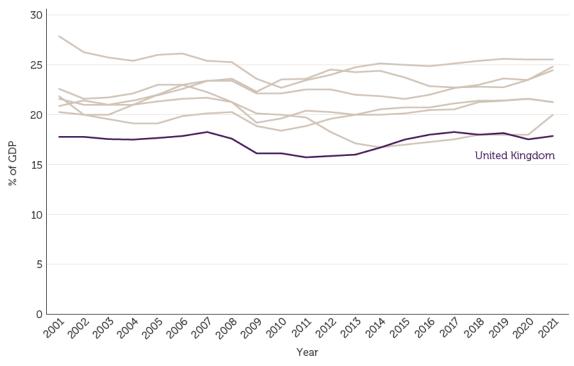
These two areas of strength are interconnected in the **supply of highly qualified people**. For example, the UK (alongside Switzerland and Luxembourg) leads Europe for its output of new doctoral graduates in science, technology, engineering, and mathematics (STEM) subjects, adjusting for population size.

Weaknesses

Investment in the UK has generally been low compared with other G7 economies (Figure 11). This is a <u>long-standing area of weakness</u>. Investment growth has been blamed for the depth of the UK's recent <u>productivity slowdown</u>.

Figure 11: Investment in the G7

(Gross fixed capital formation, PPP adjusted)

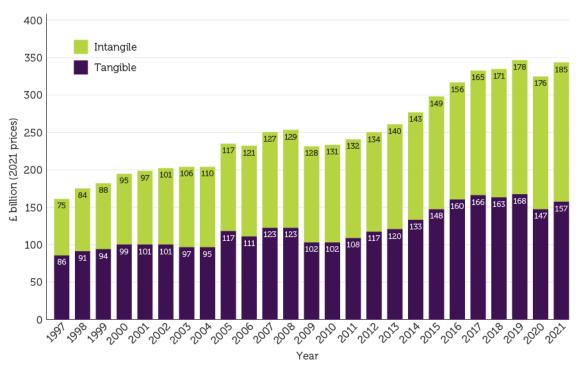


Source: OECD.

These statistics refer to investment in tangible capital equipment - machines, equipment, buildings and the like. However, UK businesses now invest a larger sum in <u>intangible</u> assets through spending on brands, advertising, software, organisational development and training (Figure 12).

Figure 12: Intangible and tangible investment, 1997-2021

(UK, market sector businesses, 2021 prices calculated using GDP deflator)



Source: Office for National Statistics.

The real value of investment in both tangible and intangible assets fell during the financial crisis and the pandemic. Tangible investment was also damaged by Brexit-related uncertainty between 2016 and 2019.

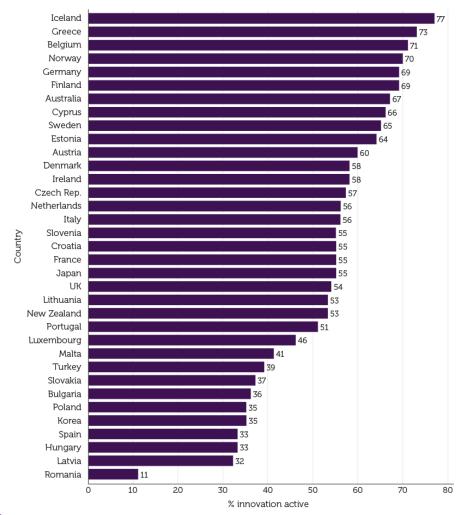
Weak investment is a reflection as much as a cause of something that Andy Haldane <u>noticed</u> when at the Bank of England: the UK's innovation system was a "hub with no spokes".

The UK is well supplied with world-class firms at the technological frontier: granted, it could always do with more, but that isn't where the (productivity) problem lies. The problem is that most firms, especially small firms, are nowhere near this level of sophistication and accomplishment. Further, the processes, forces and institutions for spreading ideas and encouraging their adoption are weak in the UK, especially in certain regions and countries. This was picked up by the evidence paper supporting the 2021 innovation strategy, which noted, "the 'trickle-down' of ideas to non-frontier firms is weak", a conclusion reinforced in a more recent study by PA Consulting and in the latest UK innovation report by Cambridge University.

As a result, innovation among British firms was middling by international standards (Figure 13).³

Figure 13: Innovation activity among businesses, 2018-20

(Selected industries, businesses with 10+ employees, 2018-20 reference period)



Source: OECD.

³ The figures reported here cannot be compared with UK Innovation Survey results quoted elsewhere in this report. Although the UK data was collected from the UK Innovation Survey, the data published by the OECD covers a narrower range of industries.

People at the heart of innovation

Workforce issues are central to innovation but frequently neglected in policy discussions.

Employees as a source of innovation

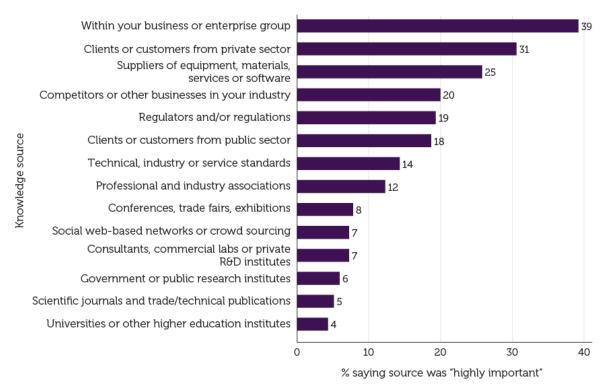
Despite <u>new uses of crowdsourcing</u>, employees remain a crucial source of knowledge, experience and ideas.

From a business perspective, internal sources were the knowledge source most often said to be highly important (Figure 14). This knowledge must originate with employees, either in the boardroom, in the lab or on the shop floor.

Figure 14: Sources of knowledge for innovation

(UK, broader innovators with 10 or more employees, 2020-22 reference period)

"During the 3 year period 2020 to 2022, how important to this business's innovation activities was information from ...?"

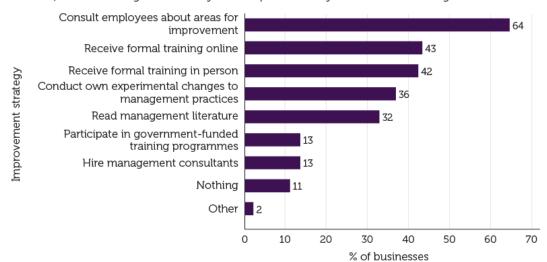


Source: UK Innovation Survey.

More generally, almost two-thirds (64%) of businesses sought the views of employees about how to improve the way their businesses are run (Figure 15).

Figure 15: Steps taken to improve management, 2023

(UK, market sector excluding agriculture and finance, businesses with 10 or more employees)



"In 2023, what do managers commonly do to improve the way this business is managed?"

Source: ONS Management and Expectations Survey 2023.

These efforts appear to be reciprocated - 60% of employees said they contribute innovative ideas (Appendix A).

Employee suggestions can also add up. For example, they are credited with <u>saving one company</u> \$230 million.

How employees are managed can make a difference

Individual contributions to innovation are shaped by the job and the workplace context. According to one <u>review of the psychology literature</u>, these seem to be more influential than demographic characteristics or personality traits, with implications for <u>how employees are managed</u>.

According to the ONS, firms with more structured management were more likely to engage in R&D and more likely to obtain labour productivity from each pound of R&D spent. People management scores were particularly influential in explaining why firms engaged in R&D. More generally, structured management was associated with better outcomes.⁴

Innovators were more likely to use 'management technology', such as HR management software, to run their business (Figure 16).

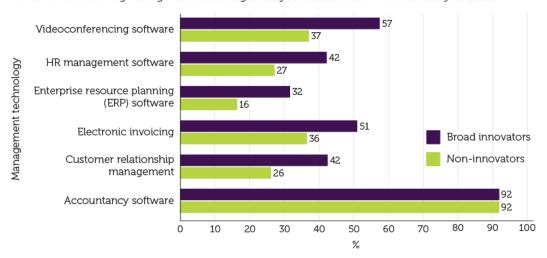
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⁴ For example, Shipton et al (2005), Sheehan et al (2012), Bos-Nehles et al (2017), Roy (2018), Renkema et al (2021).

Figure 16: Use of management technology, 2022

(UK, market sector, businesses with 10 or more employees)

"Which of the following management technologies did your business use in the calendar year 2022?"

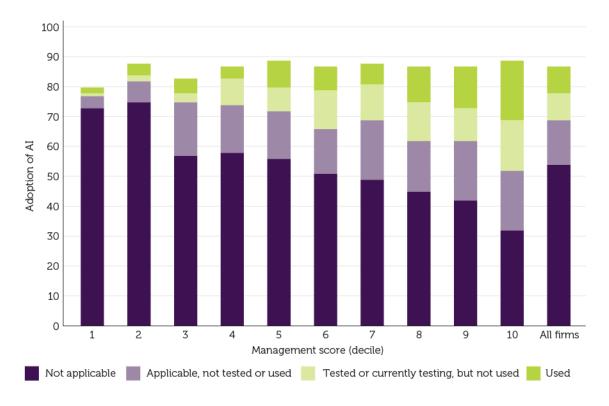


Source: UK Innovation Survey.

Use of these technologies probably didn't *cause* businesses to innovate; more likely, well-managed businesses are more likely to innovate *and* to adopt new technology. This is certainly the case for use of AI (Figure 17).

Figure 17: Use of Al by management score, 2023 (%)

(UK, market sector excluding agriculture and finance, businesses with 10 or more employees)



Bars do not add up to 100% because 'don't know' responses are not reported.

Source: ONS Management and Expectations Survey 2023.

Overall, 9% of businesses had used AI. But the proportion was 20% for the highest-scoring firms, whereas hardly any of the lowest-scoring firms had used AI.

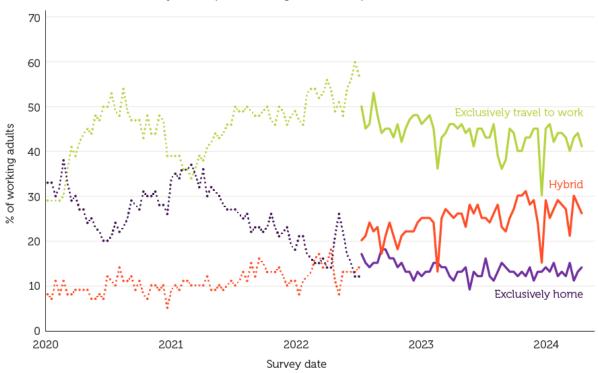
Remote and hybrid work

Another form of innovation has arguably been the shift to remote and hybrid working due to the pandemic, although opinions still differ on whether these changes will persist (Figure 18).

Figure 18: Trends in location of work, 2020-24

(GB, working adults aged 16 and over)

There was a discontinuity due to question changes in March/April 2022



The sum of these three categories will not total 100%. This is because some respondents will be neither working from home nor travelling to work in the (seven-day) reference period. Reasons may include being on annual leave or sick leave, working variable hours, being on maternity or paternity leave or being unable to work because of caring responsibilities.

Source: ONS Opinions and Lifestyle survey.

According to a <u>survey of American employers</u>, effects on creativity and innovation were some of the most commonly mentioned drawbacks from hybrid working, although actual evidence is <u>'largely anecdotal'</u>. The CIPD <u>review of the evidence</u> suggests problems may often reflect deeper management issues, such as team member interaction or the potential for knowledge-sharing.

There is <u>evidence</u> that the impact of hybrid working wasn't as bad as many employers (or workers) feared. Furthermore, while remote work does reduce certain possibilities for spontaneous face-to-face interaction, this has prompted <u>innovations</u> in <u>technology</u> and the development of other <u>remote innovation</u> practices that can work around any loss of serendipity.

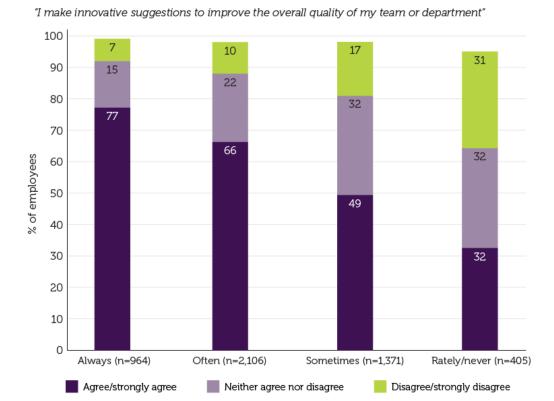
Indeed, McKinsey claim that virtual work is accelerating innovation.

Job design

Expectations of innovation in the job were more likely to see innovative behaviour. Jobs requiring independent problem-solving were far more likely to produce innovative suggestions according to employees (Figure 19).

Figure 19: Employees with innovative ideas by requirement for problem-solving, 2024

(UK, excluding self-employed, owner/proprietors and partners in a business)



"In general, how often does your main job involve solving unforeseen problems on your own?"

Bars do not always add up to 100% because 'don't know' responses are not reported.

Source: CIPD Good Work Index 2024 survey.

Giving employees the time and space to develop innovative ideas as well as, or alongside, their day-to-day duties was <u>also important</u> - the popularity of this practice among employers, though, seems to wax and wane.

Jobs with more discretion were <u>associated with more organisational commitment</u>, which leads to more innovation. However, technology <u>may undermine discretion</u>, making some jobs more routine.

Jobs that offered <u>more autonomy</u> to employees were also associated with more innovative work behaviour. However, a <u>paper written for Acas</u> warns that technology that facilitates employee surveillance can undermine autonomy, highlighting the need for employers to understand the factors that can facilitate or undermine employees' ability to come up with new ideas.

Finally, action by employers to redesign or redefine jobs can also be complemented (or countered) by employees adjusting their job or the working environment themselves (known as job crafting).

Engagement and diversity

Research <u>carried out for NESTA</u> concluded that "innovative working is not an activity restricted to a 'subset' of people with certain characteristics". In other words, organisations can't simply hire people who are (natural) innovators and rely on them to get on with it. Managers and leaders need to motivate employees and create the conditions for innovation to flourish.

The connection between engagement and innovation was apparent in <u>Gallup's analysis of engagement data in 2007</u>. Engage for Success's <u>evidence paper</u> highlighted the positive links between engagement strategies and innovation. The CIPD's <u>review</u> found evidence of a causal link to be thinner on the ground. However, factors like work motivation and organisational commitment gave innovation a shot in the arm. The connection (between organisational commitment and innovative suggestions) is clear in more recent data (<u>Appendix A</u>).

Our analysis also found a role for job meaning and job purpose. Employees whose jobs were strong on these were more likely to suggest innovations (Appendix A). This was especially the case for those employees closest to the innovation coalface. The 2022 Research and innovation (R&I) workforce survey found that respondents "generally chose their current R&I role due to their interest in the nature of the work... Three in four respondents (73%) took up their role because of the 'interesting and meaningful' nature of their current work. The second most important factor for choosing their career (55% of respondents) was a job's purpose and its link with their qualifications, skills, and experience. The location of the job, job security, pay or progression opportunities were on average marked as less important in their career decision."

A recent <u>literature review</u> found evidence that greater workforce diversity (at least in terms of ethnic/cultural diversity) had positive effects on innovation (when measured by factors such as patent counts). One reason may be because <u>"diverse teams are smarter"</u>, although, within teams, there is a balance to be struck between social cohesion and <u>intellectual honesty</u>. A recently published <u>study of firms in the East and West Midlands</u> found "greater workforce diversity in terms of gender, ethnicity and disability is positively associated with an increase in the propensity to undertake product and process innovation".

The appropriate policy response, however, is less clear. Another <u>review of recent research</u> admitted the precise reasons for underrepresentation were still 'wicked problems'. A <u>publicly funded project aiming to support diversity and inclusion in innovation</u> struggled to identify new approaches. This may be because unlocking diversity is arguably just good people management. To quote the <u>Harvard Business Review</u>: "Six behaviors, we have found, unlock innovation across the board: ensuring that everyone is heard; making it safe to propose novel ideas; giving team members decision-making authority; sharing credit for success; giving actionable feedback; and implementing feedback from the team."

Employment relations

Managers can, of course, <u>block innovative ideas by employees</u>. There is a danger that employees then feel discouraged from coming forward with ideas (<u>Appendix A</u>). While managers rarely possess a monopoly of wisdom, they often possess a monopoly of power.

The overview report of the <u>2013 European Company Surveys</u> noted: "[a]n important characteristic of the establishments that score well in terms of performance and wellbeing are their extensive practices for direct employee participation, supporting the notion that 'win-win' arrangements need to include measures to enable optimal use of employees' tacit knowledge."

⁵ Gallup publish a <u>meta-analysis</u> annually. However, innovation is not one of the measures reported.

According to <u>McKinsey</u>, "organisations that actively listen and act on recommendations from frontline employees are 80 percent more likely than others to consistently implement new and better ways of doing things."

How voice is channelled will, of course, vary. Further <u>analysis of the 2013 European Company Survey</u> found that, in private sector workplaces, trade unions were associated with more product and process innovation. There is little recent UK evidence, but our survey data (<u>Appendix A</u>) suggest that direct participation (individually, via mechanisms such as direct meetings) leads to more innovation suggestions than indirect participation (collectively, via unions or employee representatives).

Workplace innovation

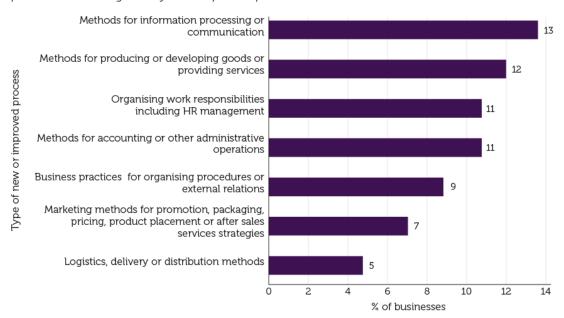
According to a <u>report on innovation in European companies</u>, "innovation is not just a technical process of developing or acquiring technology; it also requires companies to adopt work organisation, direct employee participation and HRM practices that support innovation activities." These complementary changes (alongside technological changes) are often described using the portmanteau term 'workplace innovation'. Sometimes change to the way work is organised *is* the innovation.

Just 11% of businesses with 10 or more employees said they had introduced new or significantly improved ways of organising work during the latest three-year reference period (Figure 20).⁶ This was sometimes done alongside other product, service or process improvements.⁷

Figure 20: Types of process innovation, 2020-22

(UK, market sector, businesses with 10 or more employees, 2020-22 reference period)

"During the 3 year period 2020 to 2022 did this business introduce any of the following types of new or improved processes that differ significantly from the previous processes?"



Respondents could select more than one answer.

Source: <u>UK Innovation Survey</u>.

⁶ Examples given in the questionnaire are "first use of a new system of employee responsibilities, teamwork, decentralisation, integration or de-integration of departments or education or training systems".

⁷ Until the 2017 survey, which covered the 2014-16 reference period, 18-19% of businesses said they had changed work organisation. There is no explanation for the sudden change to around 11% seen in subsequent surveys. The most likely reason is a change to the questionnaire.

Workplace innovation is sometimes seen as synonymous with the introduction or development of high-performance working (HPW). There is no single, agreed definition, but it has been <u>described</u> as "a term that is used to describe a distinctive approach to management in the workplace that aims to maximise organisational performance by investing in the skills and capabilities of employees".

The CIPD report on people management and productivity examined this in depth. Only 18% of workplaces in 2023 could be described as high-performance workplaces, down from 22% in 2018. This suggests that the widespread lack of innovation, especially among SMEs, was accompanied by a lack of investment (and, possibly, interest) in workplace innovation.

Research <u>published</u> by the OECD in 2019 confirmed the importance of work organisation. The researchers divided SMEs into three groups:

- Learning organisation SMEs that use a lot of HPW practices: "The SMEs in this class are
 distinctive for combining organisational practices designed to make use of employees'
 knowledge and capacity for problem-solving with complementary human resource
 management policies designed to provide incentives for employee involvement and
 commitment."
- **HRM hybrid SMEs** "can be distinguished from the learning organisation SMEs by their adoption of a relatively hierarchical organisational design, reflected in the very limited extent of delegation of responsibility for the planning of work execution to the employee level".
- **Simple organisation SMEs**, where employee discretion and involvement are weak across the board.

Modelling showed product and process innovation was most common, other things equal, in learning organisation SMEs and least common in simple organisation SMEs.

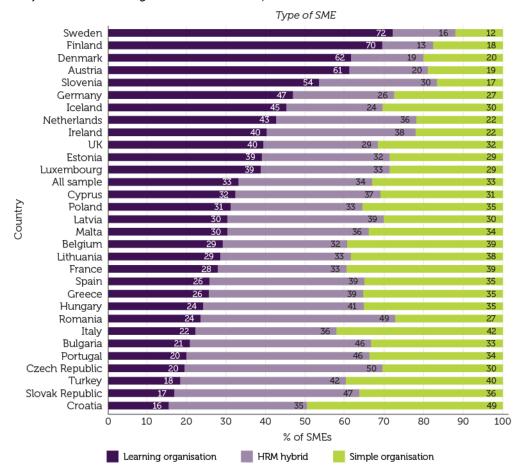
The UK had a slightly above-average share of learning organisation SMEs in 2013, but this type of SME was far less widespread than in Sweden and Finland - countries regarded as innovation leaders (Figure 21).

21

⁸ An establishment <u>was considered to be a high-performance working (HPW) establishment</u> if there were 9 or more of 14 specified practices in place.

Figure 21: Work organisation in SMEs across Europe, 2013

(establishments with 10-249 employees excluding agriculture, forestry and fishing; activities of the household; and activities of extraterritorial organisations and bodies)



Bars may not add to 100% because of rounding.

Source: Lorenz and Potter (2019), Table 3.4.

The problem, of course, is why aren't these practices more widespread if their <u>adoption is such common sense</u>? Understanding how to improve the adoption of practices that support innovation across more organisations should be a key feature of innovation strategies.

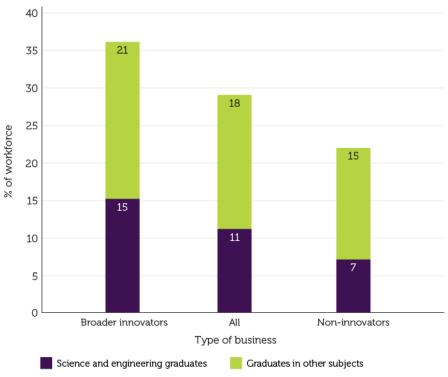
Innovation and workforce skills

A further essential enabler of innovation is workforce skills.

According to a <u>2022 survey</u>, the workforce directly involved with research and innovation was highly qualified (for example, 58% had a doctorate, compared with 2% of the UK workforce overall). Innovating firms employed more graduates than firms that didn't innovate (Figure 22).

Figure 22: Innovation and employment of graduates

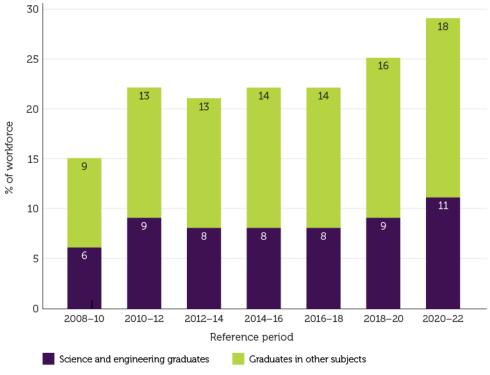
(UK, businesses with 10 or more employees, 2020-22 reference period)



Source: **UK Innovation Survey.**

Furthermore, the share of the workforce who are graduates - in both science and in other subjects - has nearly doubled since the financial crisis (Figure 23).

Figure 23: Trend in graduate share



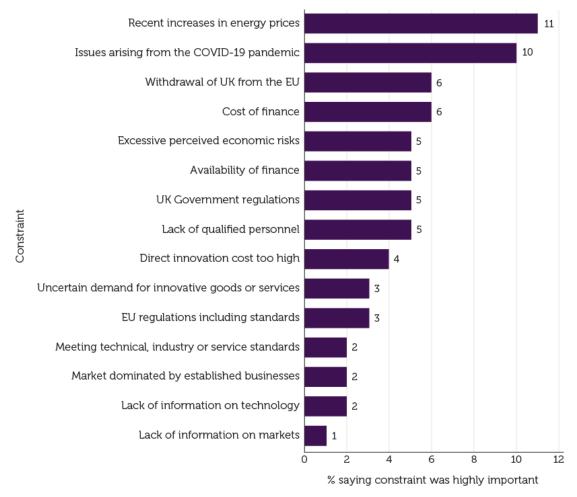
Source: <u>UK Innovation Surveys</u>.

The graduate share is likely to continue increasing, not least because older, less-qualified cohorts will leave the labour market. However, frozen tuition fees and increased susceptibility to overseas student volumes mean that concerns are growing about the <u>financial viability</u> of current higher education provision. At the same time, there is <u>growing evidence</u> that the labour market outcomes for many graduates are deteriorating, with an increasing proportion of graduates working in jobs for which they don't need a degree.

More generally, lack of skilled labour was a problem mentioned by less than 5% of businesses that didn't innovate (Figure 24). More immediate factors, such as energy price rises or COVID-19, were more likely to be given as a reason for not innovating.

Figure 24: Constraints on innovation (%)

(UK, businesses with 10 or more employees who did not innovate, 2020-22 reference period)

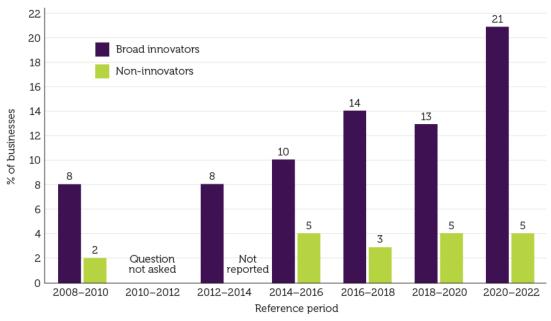


Source: UK Innovation Survey.

However, skills were more of a problem for firms that had tried to innovate, especially in recent surveys (Figure 25).

Figure 25: Lack of skilled labour as a constraint on innovation

(UK, businesses with 10 or more employees)



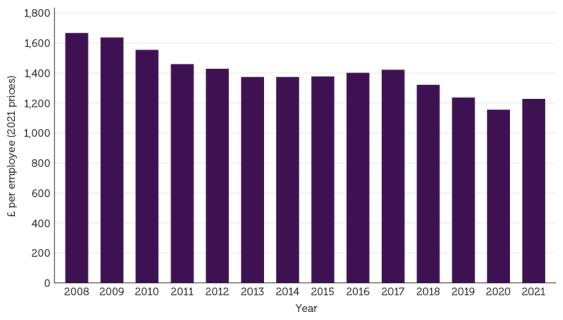
Source: **UK Innovation Surveys**.

According to the <u>European Foundation</u>: "establishments that offer comprehensive training and learning opportunities are more likely to innovate than those where the scope for skills development is limited." This was backed up by <u>experimental analysis of ONS survey data</u> and <u>the CIPD's 2023 report on productivity</u>, which both highlighted the significance of training managers in raising an organisation's performance (which will include innovation).

Unfortunately, private sector employers spent over a quarter (26%) less per employee in 2021 than they did in 2008 (Figure 26).

Figure 26: Employer spending on firm-specific training, 2008-21

(UK, market sector businesses, 2021 prices calculated using GDP deflator)



Source: Office for National Statistics.

<u>Use of digital labour platforms</u> might have reduced the need for employers to spend money on workforce training. Employers might also have tried to reduce costs, for example, by bringing training in-house that was previously provided externally.

In addition, the <u>Apprenticeship Levy</u> may have distorted patterns of apprenticeship provision away from young people, towards higher-level apprenticeships that cost more and 'cannibalise' existing training.

Innovation strategy

The election of a new government means the UK's innovation strategy needs to be replaced. Apart from new political priorities, <u>money will be tight</u>. It will be important to ensure public funding is spent efficiently where it is most needed.

The new strategy needs to continue to build on the strengths of the UK, such as scientific research and the quality of our universities. However, it will need a much stronger focus on addressing the country's weaknesses, in particular the poor level of diffusion of new technology and innovation adoption beyond relatively few frontier firms and specific sectors.

Integration with industrial strategy

A new industrial strategy must aim to <u>stimulate innovation and productivity growth across the economy</u>, including in the 'everyday economy' industries that employ many people, not just in the R&D-intensive, high-tech industries that excite politicians but employ relatively few.

A report by <u>NESTA in 2020</u> outlined what an industrial strategy for the 'everyday economy' would look like. In the short term, there would be an emphasis on improving the quality of work. In the longer term, there would be attempts to build innovative capacity and knowledge-sharing, accompanied by tweaks to regulation and existing policies and programmes. This was explored in more detail by the <u>IPPR in 2016</u>, which identified weaknesses in management and use of technology as particular issues for low-wage sectors. However, a <u>report prepared recently for the Midlands Productivity Forum</u> suggests management and (adoption of) technology remain salient issues.

According to the IPPR, "industrial strategy can be defined as the purpose-driven coordination by the state of its 'supply side' economic policies." The new government's <u>five missions</u> might provide that purpose. <u>Mission-oriented innovation policy</u> is all the rage internationally. However, there is a lively debate on the balance that should be struck between <u>top-down missions</u> that provide leadership and the imperative for innovation and <u>bottom-up policies</u> that strengthen individual elements of the innovation ecosystem instead.

Degree of ambition

The <u>2021 plan for growth</u> repeated a previous target of total UK R&D (GERD) reaching 2.4% of GDP by 2027. However, recent increases (partly due to data revisions) mean that UK GERD was already estimated to be 2.9% of GDP in 2021 (Figure 27).⁹

⁹ According to the OECD. The latest ONS estimates are slightly lower (2.81% in 2021, 2.77% in 2022).

4.0 3.5 3.0 United Kingdom 2.5 % of GDP 2.0 1.5 1.0 0.5 0.0 2015 2016 2017 2019 2020 2021

Figure 27: Private and public R&D (GERD) in the G7

Source: OECD.

Perhaps because <u>existing targets appear to have already been met</u>, later innovation strategies contain no targets for R&D intensity, merely commitments to increase the amount of public funding further.

2018 Year

Alongside this, following <u>advice from the Council for Science and Technology</u>, the previous government adopted the aspiration to be a 'science and technology superpower', despite some <u>scepticism</u>.

Drawing up a new strategy is a good time to question its underlying assumptions. There is plenty of evidence that R&D is important for sustained growth, but does this mean we should continue to spend more and more on it? And, even if the aspiration could be achieved, what are the costs and benefits to the UK population (apart from its scientists) of being a 'science and technology superpower'?

Business environment and regulation

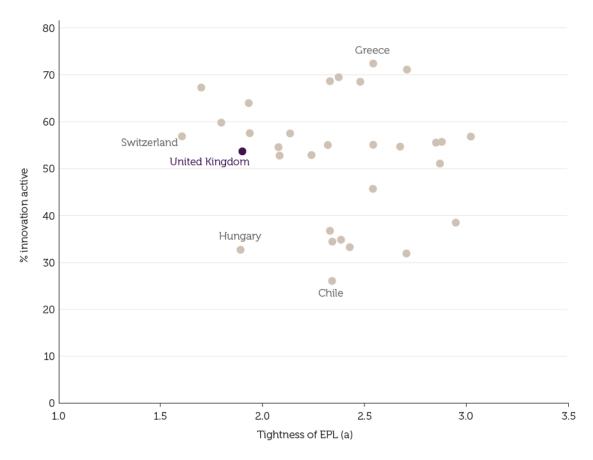
Promotion of competitive and open markets speeds up the dynamism of markets and encourages the reallocation of resources (capital and labour) towards more productive uses. Indeed, a review of the evidence by the OECD found "a large body of evidence shows that competition policy promotes efficiency-enhancing resource reallocation and, indirectly, incentivises firms to innovate and adopt new technologies". Nevertheless, as the Competition and Markets Authority acknowledges, regulation can stifle innovation when it creates or raises barriers to entry.

A government survey in 2022 found that innovative businesses were more likely than other businesses to think the balance of regulation wasn't right. In part this is to be expected: it might only be when firms try to do something new or different that they find out what they are allowed to do (and what they cannot do). Yet it also suggests that previous regulations and attempts to scrutinise them when they were being made may have given insufficient weight to their effects on innovation.

One potential source of post-Brexit divergence not considered by the previous government was employment protection legislation (EPL). Aside from the political difficulties involved in any significant change to EPL, there isn't a strong association between innovation and EPL (Figure 28).

Figure 28: Innovation and employment protection legislation, 2019

(Selected industries, businesses with 10+ employees, 2018-20 reference period for innovation activity)



(a) Individual and collective dismissals (regular contracts). Version 4, 2019.

Source: OECD.

Countries with lightly regulated labour markets have slightly higher innovation activity, but the correlation is small. 10 For example, Greece has nearly three times the innovation activity of Chile, even though the tightness of EPL is nearly the same.

The OECD ratings of EPL mainly measure the restrictiveness (or not) of the legislation; how that legislation is *enforced* may help or hinder innovation. In addition, the regulations in place may affect the *type* of innovation pursued; a study of firms in <u>France</u> found that EPL requirements on growing firms encouraged them to pursue radical, labour-saving innovations rather than more modest, incremental improvements.

¹⁰ r=-0.11. A similar (negative) correlation was found between EPL and <u>private spend on R&D</u>.

Policy recommendation

Update the UK's innovation strategy with a much stronger focus on boosting innovation adoption across the economy while continuing to support the country's strengths in 'cutting-edge' R&D and science-based innovation.

Rebalancing innovation policy

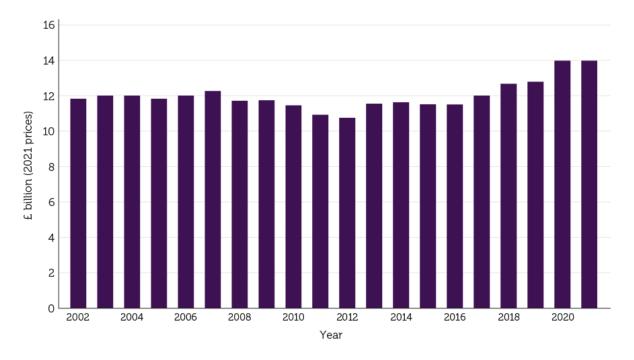
UK innovation policy has become increasingly lopsided towards support for science-based and R&D-driven innovation rather than supporting innovation adoption across the wider economy.

R&D versus the rest

Public funding of R&D escaped the worst effects of austerity (in 2010, the science budget was held flat in cash terms) and budgets have increased sharply since 2019 (Figure 29).

Figure 29: Real value of public funding of R&D, 2002-21

(UK, government budget allocations for R&D (GBARD), 2021 prices calculated using GDP deflator)

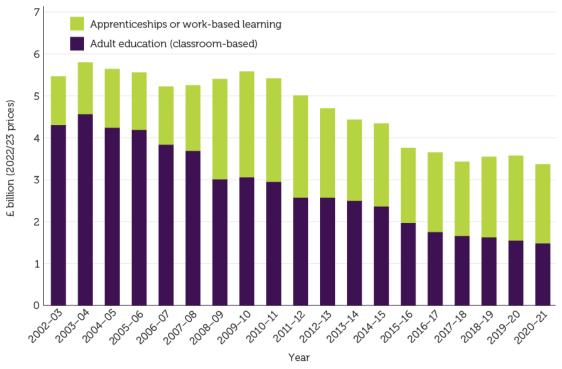


Source: OECD Main Science and Technology Indicators database.

In contrast, public funding of many other parts of the innovation system was cut severely. For example, total spending on adult education and apprenticeships in England fell by 38% in real terms between 2010-11 and 2020-21 (Figure 30).

Figure 30: Total public funding of adult education and apprenticeships, 2002-21

(England, 2022/23 prices)



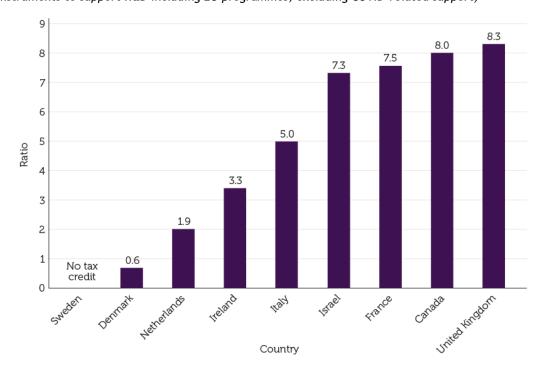
Source: Institute for Fiscal Studies.

Tax credits versus expenditure

Policy (to support business R&D) is more biased towards tax breaks in the UK than it is in any other country for which similar data is available (Figure 31).

Figure 31: Tax-expenditure ratios for support of business R&D, 2021

(All instruments to support R&D including EU programmes, excluding COVID-related support)



Source: OECD Industrial policy grants and tax expenditures database.

These figures, incidentally, exclude most <u>Patent Box</u> tax breaks; if they were included, the UK ratio would be even higher.

R&D tax credits cost the taxpayer more than any other country in the OECD (<u>Appendix B</u>). During the last decade, the cost has more than doubled, with a fourfold increase in the cost of the small and medium-sized enterprise (SME) scheme (Figure 32). According to the <u>National Audit Office</u>, the "relief for SMEs cost around £15 billion more than HMRC expected between 2015-16 and 2020-21".

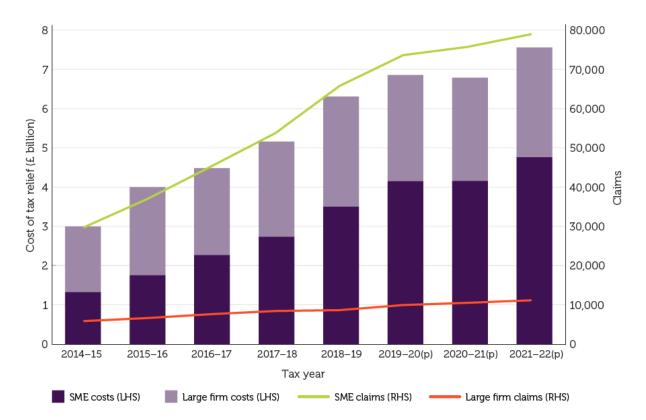


Figure 32: Expenditure and claims for R&D tax credits

Source: HMRC.

The OECD's <u>review of the evidence</u> concluded there is "now a large body of evidence in favour of their [R&D tax credits'] effectiveness in increasing business R&D expenditure, with most of the recent studies finding that each unit of tax credit translates into at least one additional unit of R&D".

The review also highlights the importance of complementary knowledge transfer and skills policies, for example to improve management capability or workers' skills, to "enhance the effectiveness of investment incentives and contribute to increasing the absorptive capacities of the least productive firms, thereby fostering technology adoption".

Whether the UK's tax credits are good value will depend on whether more R&D does lead to more economic growth (which will, again, depend on the diffusion of R&D-led innovations across the economy), and on the amount of waste (which is considerable).

The <u>IPPR estimated</u> the deadweight loss from the R&D tax credits in the middle of the last decade to be between 57% and 80%. It called for these schemes as well as the Patent Box to be largely abolished over time, with some of the revenue raised going to increase the budget of Innovate UK.

A recent <u>National Audit Office study</u> suggested that hundreds of millions - if not billions - have been wasted in payments on the SME scheme due to error and fraud. When HMRC increased its scrutiny of claims, its estimate of the percentage loss due to error and fraud went up from 5% to 24%. Contributory factors include incessant tinkering with the design of the schemes, insufficient resources given to administration, and priority being given to prompt payment of claims rather than effective scrutiny.

Changes already announced should reduce waste in future provided effective scrutiny is maintained.

Nonetheless, there is a strong argument for reforming the scheme further, even though the <u>Labour Party in opposition</u> said it would not change the scheme. A relatively straightforward change would be to reverse the increase in the subsidy rate announced in the 2023 Autumn Statement.

The Patent Box seems not to suffer from poor administration as its beneficiaries are a small number of large firms (Figure 33).

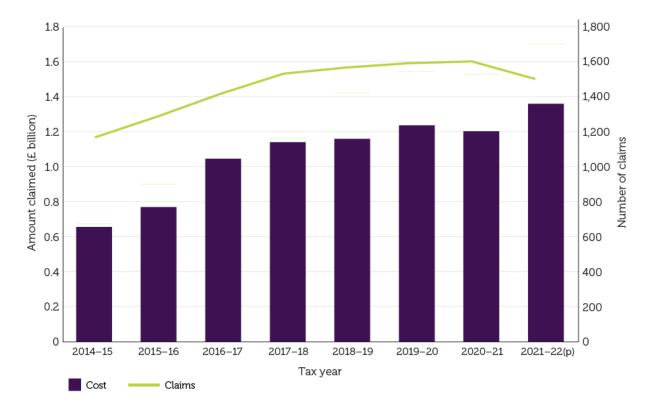


Figure 33: Expenditure and claims for Patent Box tax relief

Source: HMRC.

Ever since it was introduced, there have been concerns that the Patent Box was being used as a <u>tax loophole</u>, especially by multinationals. The scheme rules were changed because of concerns about unfair tax competition.

The <u>official evaluation</u> claimed the patent box increased business investment in the UK, but this evaluation was of the scheme's old rules. A <u>review of the evidence</u> found "no definitive consensus on its [Patent Box] effect on innovation or economic outcomes". However, a <u>crossnational study</u> suggested that Patent Box schemes had no effect on innovation.

Again, <u>Labour in opposition</u> said it would keep the patent box. But given that the cost of this tax break is increasing rapidly, there is a strong argument for abolishing it entirely.¹¹

Some of the revenue raised by restricting and abolishing these tax breaks could be used to fund policies to support skills and knowledge transfer, which could help improve innovation across the wider economy.

Policy recommendations

- 1 Maintain effective scrutiny of claims for the R&D tax credit. Reverse the increase to the subsidy rate announced in the Autumn Statement 2023.
- 2 Abolish the Patent Box.

Supporting innovation in the workplace

As well as critical resources (R&D, skilled people), innovation ecosystems and the external environment, the innovation strategy needs to set out how government can promote innovation in the workplace, especially in SMEs.

Much of the approach is discussed in more detail in the 2024 paper by the CIPD and Prospect.

Help for business

Key business improvement issues for the vast majority of (non-frontier) businesses are management capability (discussed in the CIPD <u>policy paper on improving UK management</u> capability) and adoption of existing technology.

The previous government launched two schemes providing SMEs with assistance on these specific issues, <u>Help to Grow: Management</u> and <u>Help to Grow: Digital</u>. However, take-up for both schemes has been poor, highlighting concerns about their accessibility and attractiveness to SME owner-managers.

Help to Grow: Management was announced in early 2021 as part of the previous government's replacement of its industrial strategy and built upon an earlier programme to support small business leaders during COVID-19. It is a 12-week programme of learning, networking and mentoring open to managers or leaders of businesses with between 5 and 249 employees, delivered through business schools. Participants pay a fee of £750, which is 10% of the cost, the other 90% being paid for by government. The minister then in charge of the scheme, Paul Scully, described the programme as a 'mini-MBA' that would help 30,000 small businesses over three years. However, only around 3,000 SME leaders have registered each year despite considerable promotion expense (Figure 34).

¹¹ HMRC figures on the cost of non-structural tax reliefs show that the cost of the Patent Box was projected to be £2.6 billion in 2023/24, an increase of £1.1 billion on the year before.

4,000
3,370
3,140
2,630
2,630
1,000
2021–22(a)
2022–23
Financial year

Figure 34: Participants enrolled on Help to Grow: Management

(a) Enrolments started in June 2021 ahead of the first programme modules commencing in July 2021.

Source: Help to Grow: Management statistics.

Help to Grow: Digital aimed to boost technology adoption in SMEs through an online learning and advice website offering guidance and tools plus a digital technology voucher which provided a discount, capped at £5,000, to match a maximum of 50% of the cost of new software. However, "the scheme closed to applications in February 2023 following lower than expected uptake from SMEs". Precise targets weren't published, but take-up was woefully short of the objective of supporting 100,000 SMEs (although it is difficult to see how this could ever have been achieved without damaging the scheme's value for money).

Over-optimistic forecasts of take-up by business are not new, according to the <u>National Audit Office</u>. Part of the reason may be the constant chopping and changing of policies and the organisations charged with delivering them. Another deep-rooted problem may be because SMEs vary so much that what they need from support programmes also varies significantly. It is likely that SMEs needed to already possess a level of management/digital expertise above and beyond that of the typical SME to engage with the Help to Grow schemes.

This conclusion is supported by the CIPD's research investigating the value of <u>HR support to small firms</u> through the delivery of a number of pilots in different parts of the UK. These explored whether the provision of a limited amount of HR and people management support to small firms could encourage them to improve how they managed and developed their workers and thus improve their productivity. The evaluation of these pilots found that the typical level of people management capability in most small firms (employing up to 50 people) is extremely poor, with many struggling even to comply with employment regulation. However, it also found that the provision of a limited amount of often quite basic HR support could be potentially transformational for these small firms and was associated with improved workplace relations, labour productivity and financial outcomes.

There was also some evidence from the pilots that small firms, having received a limited amount (up to two days) of 'pump priming' HR support, were subsequently more likely to spend their own money on professional HR consultancy support.

This finding is reinforced by Professor Carole Atkinson in a <u>more recent paper</u> exploring the factors that influence small firms accessing business support and the link to productivity. Commenting on the findings, she observed, "HRM needs of SMEs may often be basic, but their resolution can be transformational and stimulate a more strategic orientation towards HRM issues."

There is no shortage of business support available. At the time of writing, there are 127 'schemes' offering finance and support available via <u>Gov.uk</u>, although many of these are only available in specific areas. Yet take-up is often low and the support available is often criticised for extreme variability in terms of cost, quality and availability. This may be because of the limited progress made on improving the provision of help with the basic people management issues that all employers face.

The Spending Review is a good time to take stock of this provision and, where necessary, rationalise or consolidate. It can build on lessons learned from the <u>Business Basics programme</u>, the activities of <u>Be the Business</u> and the CIPD's practical experience of trying to improve people management in SMEs.

The ambition should be to develop a cost-effective, accessible business support service that can provide bespoke, high-quality advice to SMEs on the capabilities needed to boost innovation and growth regardless of a firm's sector or the postcode in which they operate.

A dilemma that will arise is the balance between local and national delivery. National delivery via local enterprise partnerships (LEPs) satisfies calls from potential recipients for consistency and avoids 'postcode lotteries', but it has been <u>criticised</u> for failing to reflect local conditions or priorities. The previous government's decision to <u>transfer core LEP functions to local authorities in England</u> could encourage the proliferation of geographically distinct, independently marketed schemes.

In addition, parts of the innovation ecosystem, such as the network of Catapult centres, could get more involved with people management issues. According to the <u>Productivity Institute</u>, R&D and innovation institutes in the UK "require new, more flexible, remits that include not only technology development, but broader and more comprehensive concepts of technology adoption and diffusion (including enhancing industrial absorptive capacity through contributions to workforce development)".

Partnership in the workplace

Management-employee relations built on trust and respect can unleash workplace innovation.

Hence a further element of any attempt to boost workplace innovation would be the development of sector institutions that improve partnership working between employers and trade unions and enhance workplace practice at an industry level.

These institutions could support collective employer action within sectors to improve management capability, raise investment in workforce development and boost adoption of technology.

Sector bodies may need to enhance their business improvement capability. The government could support this with a £50 million sector-based social partnership fund that sector bodies could bid for to improve their ability to support partnership working between employers and unions and improve workplace practices at a sector level.

Getting the foundations right

There is little point in introducing new employment legislation unless it is enforced properly. However, evidence suggests the UK's enforcement system is extremely weak. The government recognises this and the <u>King's Speech</u> contains proposed legislation to improve labour market enforcement, through the creation of a new Fair Work Agency and by strengthening the policing of firms that breach their legal responsibilities.

The CIPD's <u>research on improving labour market enforcement</u> suggests there also needs to be a much stronger focus on supporting employers - particularly SMEs - to comply with the law and improve their people management capability.

To help achieve this, the government should double Acas's budget to boost its ability to advise small employers and individuals on people management, workplace conflict and employment rights. Inspectors from the different enforcement agencies should be allocated on a regional as well as sectoral basis to work locally with Acas and local business advisers to ensure that local employers and their staff are made fully aware of relevant employment legislation and rights and are supported to deliver them effectively. In this way, labour market enforcement becomes part of the innovation ecosystem.

Policy recommendations

- 1 Review business support services with a view to developing a cost-effective, accessible business support service that can provide bespoke, high-quality advice to SMEs on the capabilities needed to boost innovation and growth.
- 2 Establish a £50 million sector-based social partnership fund which sector bodies could bid for to improve their ability to support partnership working and collective action to improve management capability, skills development and technology adoption.
- 3 Double the Acas budget from £60 million to £120 million a year to enable it to further develop its people management advisory services to support employer compliance as part of a more progressive labour market enforcement system.

Public sector innovation

The innovation strategy should also cover the public sector. The government's ambitions for public services will only be met if there are <u>significant productivity improvements</u>. Reform and adjusting priorities will only deliver limited gains; widespread innovation will also be needed.

Experience of public sector innovation in <u>other countries</u> was that "employee-driven innovation is widespread".

<u>Motivation is crucial</u>. Recently, the <u>chief executive of NESTA</u> stated that "the most important fuel for innovation will be the energy, creativity and knowledge of front-line staff. Since COVID, there appears to be a loss of discretionary effort, with staff too exhausted or drained to go above and beyond. Another round of public service reform 'done to' people, rather than 'with' them, will be counterproductive."

Our analysis supports this observation (Appendix C).

Improving line management is central to restoring morale. This is not simply more management training - although that may be necessary. It is about giving the management role due weight in job design, employee selection, and staff appraisal. For those not suited for (or interested in) a management role, there need to be worthwhile alternative progression opportunities to make the most of people's specialist technical skills.

The CIPD is working with major public sector employers to improve people management, unlock creativity and improve outcomes for the public.

Increased productivity will be driven in part by the government's vision of <u>'tech-enabled public services'</u>. However, its thinking seems presently preoccupied with the opportunities for AI to improve services and save money. There is no mention yet of the difficult people management issues likely to arise in widespread application of AI - not least that the government may be relying on the goodwill of employees who are concerned that AI is going to take their jobs.

As with the private sector, experimentation will be important. A variant of the <u>sandbox</u> approach may be needed where public sector organisations (or parts of them) temporarily diverge from set agreements, policies or protocols in order to try out new ways of doing things. Thought will need to be given to (at least) two issues: the best ways to secure technology adoption at the micro level, and how to scale improvements up to the macro level.

Policy recommendations

Set up and fund a limited number of 'workforce productivity pilots' to develop innovative approaches to public sector people management and technology adoption that improve efficiency and effectiveness.

Appendix A: Innovative ideas and quality of work

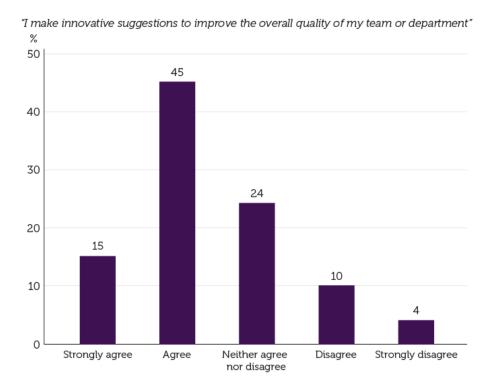
This appendix looks at employees' willingness and ability to put forward innovative ideas and how this varies according to the quality of work, based upon the data used to compile the <u>CIPD</u> Good Work Index 2024.¹²

Innovative ideas

The key question asked respondents whether they agreed or disagreed with a statement: "I make innovative suggestions to improve the overall quality of my team or department." Three-fifths of employees agreed (or strongly agreed) with this statement and just over an eighth disagreed or strongly disagreed (Figure A1).

Figure A1: Employees with innovative ideas, 2024

(UK, excluding self-employed, owner/proprietors and partners in a business)



Bars do not add up to 100% because 'don't know' responses are not reported.

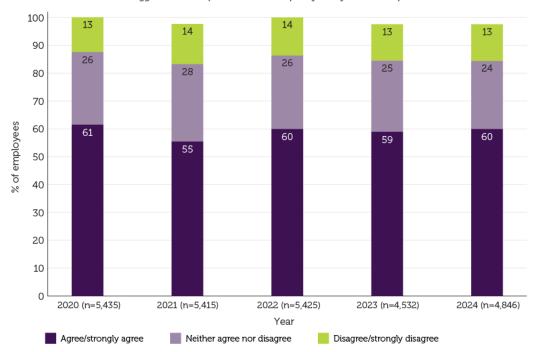
Source: CIPD Good Work Index 2024 survey.

There has been little change since the question was first asked in 2020 (Figure A2).

¹² Since 2018, the CIPD has been measuring job quality in the UK through a comprehensive survey of about 6,000 workers across different sectors. The survey is carried out by YouGov, using its UK panel of adults, is run annually, and forms the basis of the <u>CIPD Good Work Index</u>. The 2024 survey was carried out in January-March 2024 using an online questionnaire. The quota used and subsequent weighting give a sample which, based on the latest ONS figures, was representative of the UK workforce in terms of gender, full- or part-time work status, organisation size within each sector, and industry. All the survey results presented in this report have been weighted except for cell sizes, identified by (n=xxx), which are generally unweighted. Throughout this report, the guidelines issued by YouGov have been followed regarding not reporting any results based on fewer than 50 respondents (unweighted n<50) to ensure reliability in the analysis of the data collected. In addition, in the (few) cases where results are based on fewer than 100 respondents (50<n<100), special care should be taken in interpreting these results.

Figure A2: Employees with innovative ideas, 2020-24

"I make innovative suggestions to improve the overall quality of my team or department"



Bars do not always add up to 100% because 'don't know' responses are not reported.

Source: CIPD Good Work Index surveys.

There was also very little variation according to the main employee characteristics (Figure A3).

Figure A3: Employees with innovative ideas by personal characteristics, 2024

(UK, excluding self-employed, owner/proprietors and partners in a business)

"I make innovative suggestions to improve the overall quality of my team or department" Total (n=4,846) Male (n=2,493) Female (n=2,353) 18-24 (n=329) 25-34 (n=1,083) 35-44 (n=1,122) 45-54 (n=1,158) 55+ (n=1.154) Ethnic minority (n=357) White (n=4,387) Disabled (n=760) No disability (n=4,062) Tenure with organisation: 6 months or less (n=277) More than 6 months up to a year (n=286) More than a year up to 2 years (n=547) More than 2 years up to 5 years (n=1,000) More than 5 years up to 10 years (n=1,032) More than 10 years up to 15 years (n=607) More than 15 years up to 20 years (n=453) More than 20 years (n=627) 20 30 40 50 60 Agree/strongly agree (%) Neither agree nor disagree (%) Disagree/strongly disagree (%)

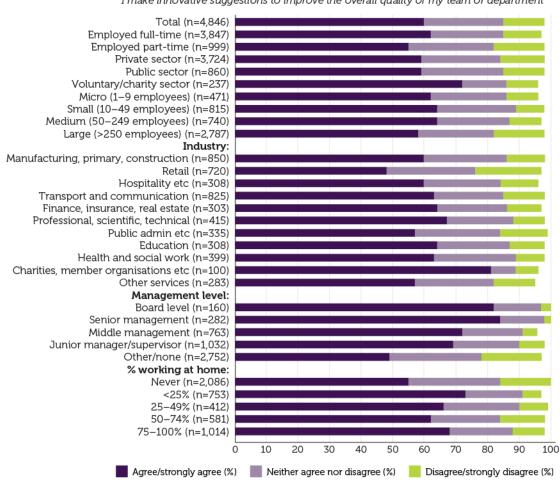
Bars do not always add up to 100% because 'don't know' responses are not reported.

Source: CIPD Good Work Index 2024 survey.

In contrast, the type of job and the workplace context made a substantial difference (Figure A4).

Figure A4: Employees with innovative ideas by job-related characteristics, 2024

(UK, excluding self-employed, owner/proprietors and partners in a business)



"I make innovative suggestions to improve the overall quality of my team or department"

Bars do not always add up to 100% because 'don't know' responses are not reported.

Source: CIPD Good Work Index 2024 survey.

Full-time employees were more likely than part-time employees to come forward with innovative ideas, as were employees in the charity/not-for-profit sector, whereas employees in retail were least likely to have innovative suggestions. Managers at all levels were more likely to make suggestions than other employees. Finally, employees who never worked at home were less likely to have innovative suggestions than people who worked from home some of the time, but this may be due in part to the backgrounds of employees who spend time working from home.

These responses reflect three factors involved in agreeing with this statement:

- willingness to offer a suggestion for improvement (which is likely to depend on employee motivation and engagement)
- enough knowledge of the good, service or process for the employee to offer a suggestion for improvement that is credible to others (likely to be why managers more often offer suggestions)

• how the employee thinks their suggestion will be received. Employees who think they have a good idea, but who think it would be received badly, may be tempted to 'sit on their hands' (perhaps another reason why managers are more likely to make suggestions).

Dimensions of good work

There are seven dimensions to job quality in the CIPD Good Work Index:

- employment contracts
- pay and benefits
- work-life balance
- job design and nature of work
- relationships at work
- · employee voice
- health and wellbeing.

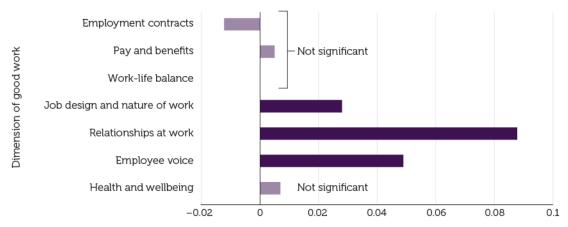
However, modelling suggests that only three of these have statistically significant links to innovative suggestions: job design and nature of work; relationships at work; and employee voice (Figure A5).¹³

Figure A5: Links between innovative ideas and dimensions of good work, 2024

(UK, excluding self-employed, owner/proprietors and partners in a business)

"I make innovative suggestions to improve the overall quality of my team or department"

Predicted increase in probability of agree/strongly agree following a one standard deviation increase in Good Work Index component:



Source: CIPD Good Work Index 2024 survey.

For these three dimensions, further modelling sought to investigate which components of these three dimensions had the greatest impact (Figure A6).¹⁴

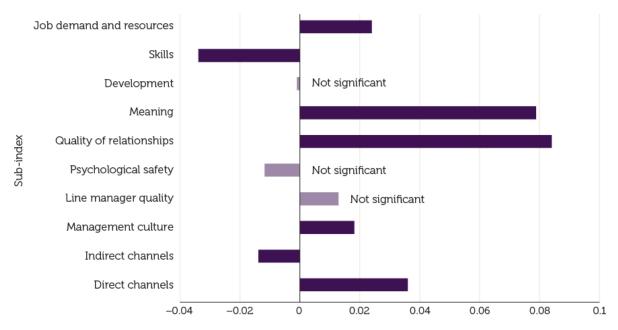
 13 An ordered logit model was fitted with adaptive performance (coming up with innovative ideas) as the dependent variable. Controls were added for personal and job-related characteristics (age, gender, ethnicity, disability, region, tenure with organisation, sector, industry, education, managerial status, organisation size). Finally, the seven indices for the dimensions of good work were added (n=4,327, pseudo R^2 =0.0859).

 14 As the model fitted previously, except that the indices for three dimensions (job design and nature of work, relationships at work, and employee voice) were replaced by the underpinning sub-indices as detailed in the latest explanation of the methodology (n=3,838, pseudo R²=0.1119).

Figure A6: Links between innovative ideas and dimensions of good work: more detailed analysis, 2024

"I make innovative suggestions to improve the overall quality of my team or department"

Predicted increase in probability of agree/strongly agree following a one standard deviation increase in Good Work Index component:



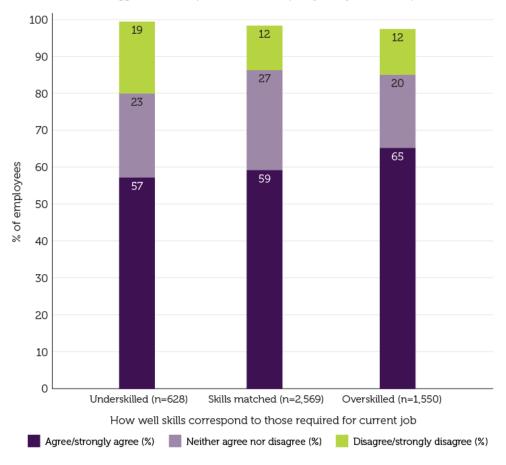
Source: CIPD Good Work Index 2024 survey.

Job design and the nature of work

The negative effect for the 'skills' sub-index appears to contradict other evidence. However, this sub-index really measures the *quality of the match* between the skills and qualifications of the employee and the skills and qualifications required by their jobs. Many UK employees thought they were overskilled - in other words, they possessed the skills to do more demanding jobs - and the overskilled were the most likely to come up with innovative ideas (Figure A7).

Figure A7: Employees with innovative ideas by quality of skills match, 2024

"I make innovative suggestions to improve the overall quality of my team or department"



Bars do not always add up to 100% because 'don't know' responses are not reported.

Source: CIPD Good Work Index 2024 survey.

Employees were also far more likely to have innovative ideas when highly committed to their organisation's purpose, something captured in Figure A6 by the meaning sub-index (Figure A8).

Figure A8: Employees with innovative ideas by organisational commitment, 2024

100 47 17 38 15 90 24 40 78 70 66 60 % of employees 19 50 19 40 40 40 30 32 20 10 0 Strongly disagree Strongly agree Neither agree Disagree (n=863) (n=2.569)nor disagree (n=810) (n=187) "I am highly motivated by my organization's core purpose"

"I make innovative suggestions to improve the overall quality of my team or department"

Bars do not always add up to 100% because 'don't know' responses are not reported.

Neither agree nor disagree (%)

Source: CIPD Good Work Index 2024 survey.

Agree/strongly agree (%)

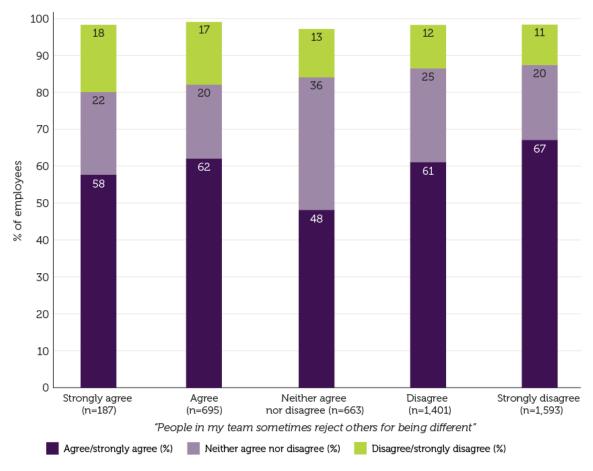
Relationships at work

The (just insignificant) negative effect of psychological safety is at odds with academic and practitioner thinking, including the CIPD's <u>review of the evidence</u>. Further analysis suggests this result is being driven by the behaviour of a (relatively) small proportion of employees who say they work in teams that sometimes reject others for being different, yet say they are highly innovative themselves (Figure A9).

Disagree/strongly disagree (%)

Figure A9: Employees with innovative ideas by team's acceptance of difference, 2024

"I make innovative suggestions to improve the overall quality of my team or department"



Bars do not always add up to 100% because 'don't know' responses are not reported.

Source: CIPD Good Work Index 2024 survey.

Employees were most likely to make innovative suggestions where the 'rules of the game' (for good or ill) were most clearly understood. Not being able to say whether being different would be welcomed had the least innovative outcome.

This result has some support from the literature on <u>creativity in teams</u>. Homogeneous teams can be very effective at generating ideas because everyone is 'on the same wavelength', albeit with the risk of 'groupthink'. More diverse teams reduce the risk of 'groupthink' but might increase the time lost due to 'translation errors' or other conflict within the team.

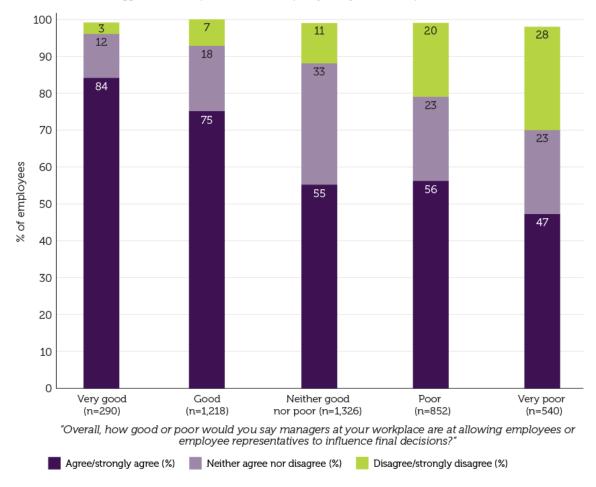
Employee voice

Direct channels of communication such as staff meetings or employee surveys had a positive link with employees making innovative suggestions, whereas indirect channels of communication via trade unions or employee representatives had a negative effect.

The other aspect of voice with a positive effect was management culture, which measured employee perceptions of how receptive managers were to the exercise of employee voice. Particularly influential was the perceived scope to affect final decisions (Figure A10).

Figure A10: Employees with innovative ideas by ability to influence final decision, 2024

"I make innovative suggestions to improve the overall quality of my team or department"



Bars do not always add up to 100% because 'don't know' responses are not reported.

Source: CIPD Good Work Index 2024 survey.

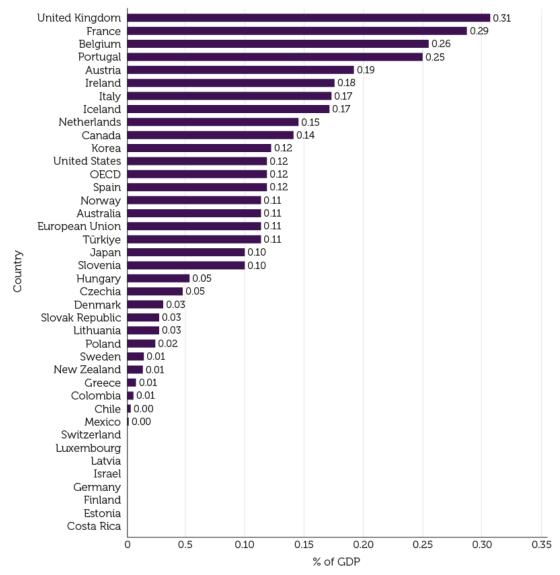
Willingness to come up with innovative ideas thus depends in part on how suggestions for improvement are treated. A lack of influence on final decisions leads to fewer ideas in the first place.

Appendix B: International comparisons of business R&D policy mix

This appendix reviews data collated by the OECD on the cost of policies to stimulate business R&D (BERD). All data is for 2019, so that comparisons are not affected by COVID-19-related factors.

In 2019, the cost of R&D tax credits was greater in the UK than anywhere else in the OECD (Figure B1).

Figure B1: Cost of R&D tax credits across the OECD, 2019



Source: OECD.

Eight countries did not at this time have a tax credit. Despite the high overall cost, the UK scheme was not especially generous for large firms that made profits, which accounted for most of the BERD carried out (Figure B2).

France Slovak Republic Portugal Colombia 34 Spain Chile Lithuania Ireland Iceland Poland 22 Slovenia 21 Norway 21 Czechia Hungary New Zealand Japan Austria Netherlands 15 Belgium Country Canada United Kingdom Australia Greece United States Italy Türkiye

Figure B2: Implied R&D tax credit subsidy rates for large profitable firms, 2019

Mexico Sweden Korea Latvia

Estonia Denmark Switzerland Luxembourg Israel Finland Germany 0

0

5

10

However, the UK's arrangements were among the most generous for small firms that made a loss (Figure B3). And it was claims for the small firm credits that increased most quickly, leading to the high overall cost.

15

20

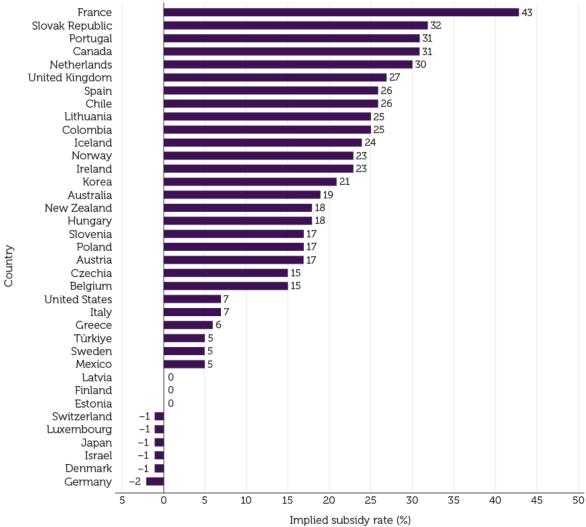
Implied subsidy rate (%)

40

45

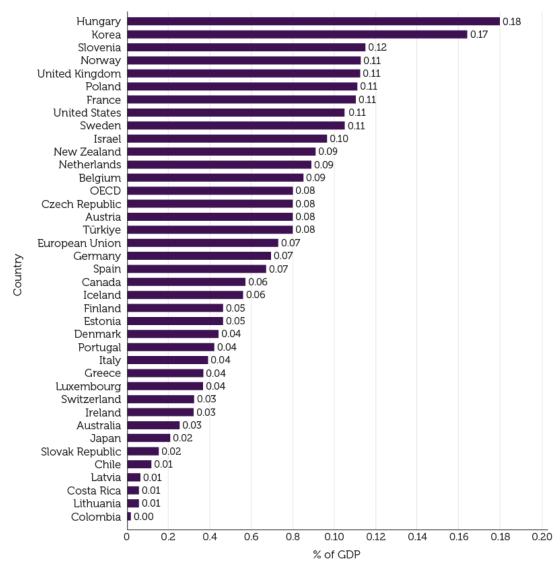
50

Figure B3: Implied R&D tax credit subsidy rates for small, loss-making firms, 2019



BERD was also financed by government grants and other forms of expenditure programme, with the UK again being one of the heaviest spenders (Figure B4).

Figure B4: Government-financed BERD across the OECD, 2019



The result is that the UK committed more resources to financing BERD than any other country, just ahead of France (Figure B5).

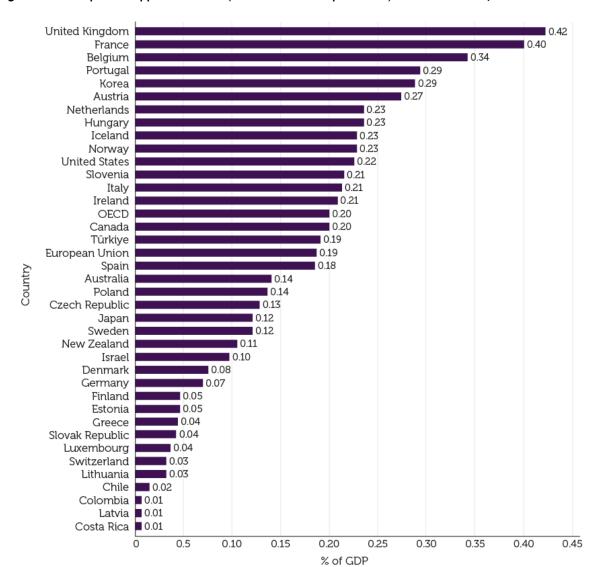


Figure B5: Total public support for BERD (tax credits and expenditure) across the OECD, 2019

The amount of support does have some pay-off in the level of BERD carried out in the UK (Figure B6).

5 Israel 4 Korea BERD (% of GDP) 3 2 United Kingdom 1 Portugal 0 0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.00

Figure B6: BERD by total public support for BERD (tax credits and expenditure) across the OECD, 2019

However, the amount of public support is not the decisive factor. For example, Korea and Portugal commit similar proportions of GDP to public support for BERD, yet Korea has BERD-intensity roughly five times that of Portugal.

Total public support for BERD (% of GDP)

Appendix C: Public sector morale

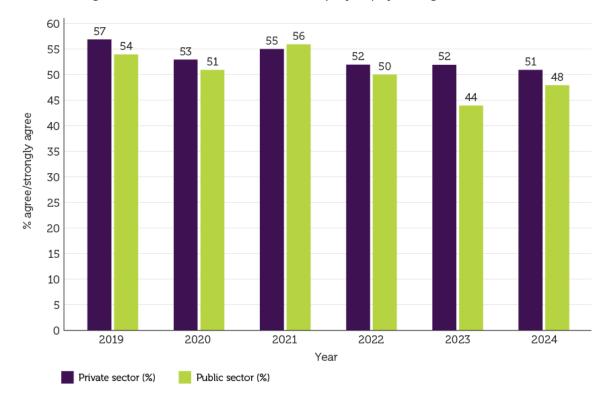
According to <u>employers surveyed in autumn 2023</u>, just a quarter in the private sector thought employee morale was worse than before the pandemic. In the public sector, however, half of employers thought morale was worse. A key issue in the public sector was staff shortages (and the extra workload they often lead to).

The willingness or ability of public sector employees to supply discretionary effort ('going the extra mile') fell sharply in 2023, according to the data used to compile the <u>CIPD Good Work</u> Index, before a partial recovery in 2024. In the private sector, there was no such fall (Figure C1).

Figure C1: Discretionary effort, 2019-24

(UK, excluding self-employed, owner/proprietors and partners in a business)

"I am willing to work harder than I have to in order to help my employer or organisation"



Source: CIPD Good Work Index surveys.

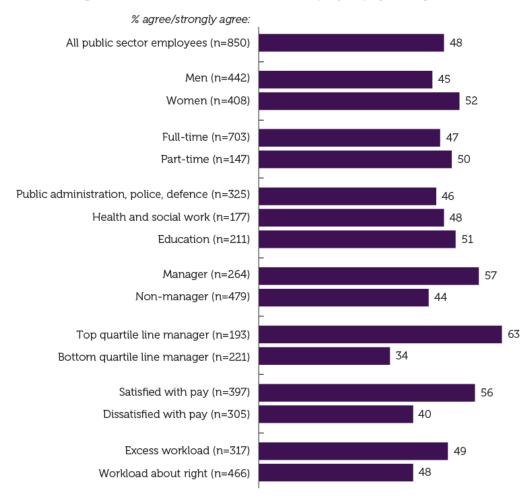
Factors that have prevented public sector employees releasing discretionary effort include pay (or the lack of it) and the quality of line management (Figure C2).¹⁵

-

¹⁵ These are managers in the top and bottom quartiles of the line manager sub-index. These quartiles were used extensively in our report on the importance of people management.

Figure C2: Supply of discretionary effort by public sector employees, 2024

"I am willing to work harder than I have to in order to help my employer or organisation"



Source: CIPD Good Work Index 2024 survey.

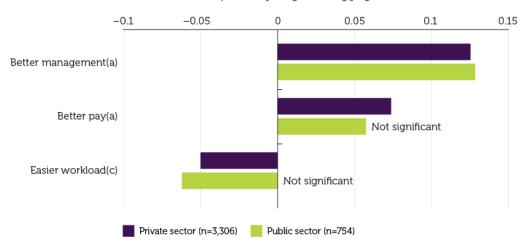
Modelling suggests that better line management would have more of a (beneficial) impact on discretionary effort in both public and private sectors than either better pay or an easier workload (Figure C3).¹⁶

 $^{^{16}}$ Ordered logit models were fitted with discretionary effort as the dependent variable. Controls were added for personal and job-related characteristics (age, gender, ethnicity, disability, region, tenure with organisation, sector, industry, education, managerial status, organisation size) together with the line manager sub-index and responses to the pay satisfaction and workload questions. Separate models were run for private sector employees (n=3,306, pseudo R^2 =0.0705) and public sector employees (n=754, pseudo R^2 =0.0781).

Figure C3: How to increase the supply of discretionary effort, 2024

"I am willing to work harder than I have to in order to help my employer or organisation"

Predicted increase in probability of agree/strongly agree due to



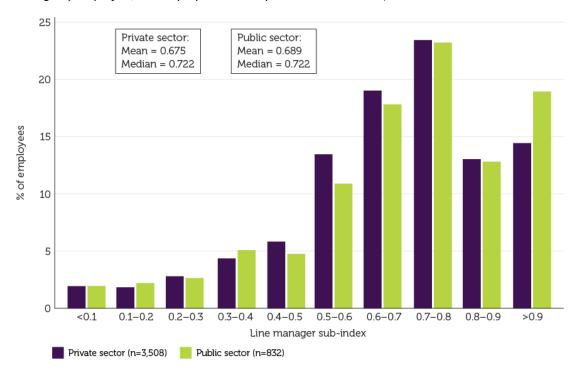
- (a) An increase of one standard deviation in the line manager sub-index (explained in the CIPD's report).
- (b) The (unknown) increase in pay sufficient to turn disagreement with the question "To what extent do you agree or disagree with the following? Considering my responsibilities and achievements in my job, I feel I get paid appropriately" to agreement.
- (c) The (unknown) decrease in workload sufficient for the workload to be 'about right' rather than 'too much'.

Source: CIPD Good Work Index 2024 survey.

The conundrum is that line manager quality, as judged by employees, was, if anything, higher in the public sector than in the private sector (Figure C4).

Figure C4: Line manager quality in private and public sectors, 2024

(UK, excluding self-employed, owner/proprietors and partners in a business)



The line manager sub-index is explained in the CIPD report The importance of people management.

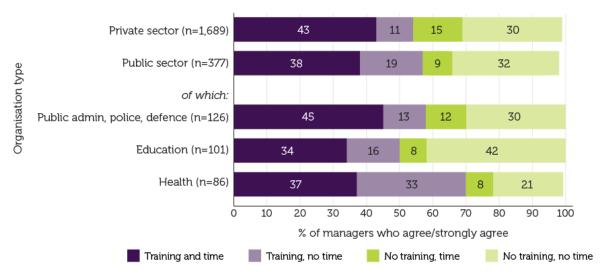
Source: CIPD Good Work Index 2024 survey.

Managers themselves had a less sanguine view (Figure C5). Public sector managers were more likely to say they had been trained in people management than their private sector counterparts, but they were less likely to say they were given the time to carry out their management responsibilities as well as they would wish.

Figure C5: Manager training and support, 2024

(UK, line managers excluding self-employed, owner/proprietors and partners in a business)

"I receive the training and information I need to manage my staff well"
"I have the time I need to manage my staff well"



Bars do not sum to 100% because 'don't know' answers are not reported.

Source: CIPD Good Work Index 2024 survey.

Managers in education (mainly in schools) were the most likely in the public sector to say they lacked both adequate training and the time to manage staff well.

CIPD

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