Redefining ~~ARTIFICIAL~~ INTELLIGENCE

The Growth of AI Among Small Firms

fsb

Federation of Small Businesses

ACKNOWLEDGEMENTS

WHO WE ARE

The Federation of Small Businesses (FSB) is the UK's grassroots business organisation. We are a cross-party non-profit body that represents small business and self-employed members in every nation and region.

For 50 years, we have been the authoritative voice on policy issues affecting the UK's 5.5 million small businesses, microbusinesses and the self-employed. FSB is the UK's largest business group and leading business campaigner, focused on achieving change which supports smaller businesses to grow and succeed.

We also provide our members with a wide range of vital business services, helping them to start, run, and grow successful businesses through high quality protection and support. This includes 24/7 legal support, financial expertise, training and events, debt recovery and employment/HR advice – alongside a powerful voice heard by governments at all levels.

Our local, national and international activism helps shape policy decisions that have a direct impact on the day-to-day running of smaller businesses. We work for their interests through research and engagement with our members and by effective campaigning - influencing those in power through policy analysis, public affairs, media and public relations activity.

Our policy and advocacy work starts with our expert team in Westminster, which focuses on UK and England policy issues, the UK Government, Parliament and the media. Further to this, our teams in Glasgow, Cardiff and Belfast work with governments, elected representatives and media in Scotland, Wales and Northern Ireland.2

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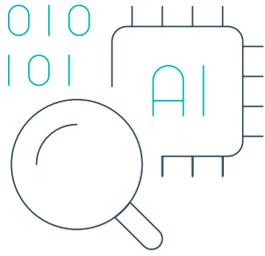
20%
of small businesses say they **use AI within their business**
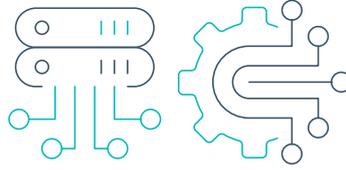
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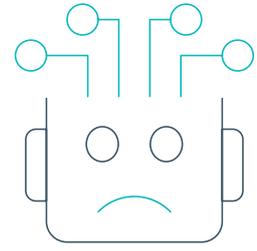
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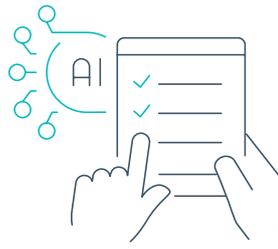
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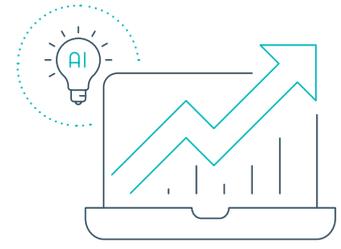
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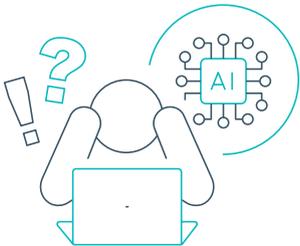
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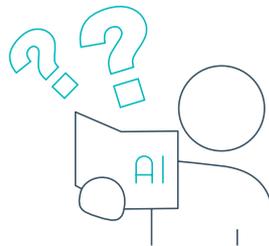
46%
of small businesses say they or their workforce **lack the knowledge and/or skills** to utilise AI successfully

25%
of small businesses in **information and communication** are concerned that AI will **reduce the viability of their business**

FOREWORD

Artificial Intelligence (AI) was once hailed as something far-fetched and fictional, but almost overnight, it became part of people's daily lives. Today, AI outpaces even the rise of the dot.com boom, with today's headlines now dominated by deepfakes and chatbots like Google Gemini and ChatGPT. However, the current debate often overlooks small businesses and the self-employed

There are 5.5million small businesses in the UK and with 20 per cent already using AI, their role in AI's trajectory is undeniable. Small firms are agile and can make quick changes to their operations, so with the right framework, they will be able to embrace AI at pace. Forgetting them when looking at the opportunities – and risks – AI will bring would be a grave error.

But with AI's rapid growth, the need for a balanced regulatory framework is urgent. Whether small businesses and the self-employed are adopters of AI or creators of AI, they face vulnerabilities that larger tech companies will be less at risk of. Our report shows that 25 per cent in the information and communication sectors, for instance, fear AI may undermine the long-term viability of their business. Regulation, therefore, is key.

AI powered technologies have the potential to improve business investment and foster growth. The role of Government extends beyond managing threats – it has a pivotal role to play in boosting digital trade, raising productivity, and breaking down barriers to tech adoption.

One of the most important priorities for policymakers is to address the AI skills gap, with 46 per cent of firms lacking the knowledge to integrate AI. We might not have flying cars or time travel in our future like popular culture promised, but we do have AI – and it has the potential to bring endless benefits to the economy. But before it does, we need to ensure we're creating the right environment for small firms to thrive in.

Tina McKenzie MBE
FSB, Policy and Advocacy Chair

KEY FINDINGS

Small business use of AI

- **20 per cent of small businesses say they use one or more of the below technologies within their business:**

  - Generative AI (12%)

  - Machine learning (3%)

  - Predictive AI (5%)

  - Robotics (1%)

  - Computer vision (2%)

  - Natural language processing (5%)

  - Deep learning (2%)

  - Other technology related to AI (2%)

- **This varies by sector:**

  - 37 per cent of small businesses in professional, scientific, and technical activities

  - 34 per cent of small businesses in information and communication

  - 14 per cent of small businesses in manufacturing

  - 12 per cent of small businesses in accommodation and food services

  - 11 per cent of small businesses in wholesale and retail

  - 1 per cent of small businesses in construction

Benefits

- **55 per cent of small businesses state AI could provide their business with potential benefits. These include:**

  - Working more efficiently (40%)

  - Being able to automate tasks (29%)

  - Developing / improving products and services (24%)

  - Improving customer experience (22%)

  - Providing cost / budget savings (21%)

  - Gaining insights into their customer base (18%)

  - Eliminating administrative jobs (15%)

  - Initiating new business models (13%)

Concerns

- **73 per cent of small businesses, however, still have concerns as to how AI might potentially impact their business.**

  - 46 per cent of small business owners say they or their workforce lack the knowledge and/or skills to utilise AI successfully.

  - 31 per cent of small businesses are concerned about their ability to manage AI securely / manage security risks.

  - 29 per cent of small businesses say that large businesses have more resources to better utilise AI.

  - 24 per cent of small businesses are concerned over the impact of deepfakes on their business brand / reputation.

  - 20 per cent of small businesses are concerned about the abuse of their Intellectual Property (IP) rights.

  - 12 per cent of small businesses are concerned that AI will reduce the long-term viability of their business.

- **For the small businesses who currently use AI:**

  - 37 per cent say that large businesses have more resources to better utilise AI.

  - 35 per cent have concerns about abuse of IP rights.

  - 31 per cent are concerned about the commercial impact of deepfake technology.

- **40 per cent of small businesses in manufacturing say that large businesses have more resources to better utilise AI.**

- **30 per cent of small businesses in wholesale and retail say they are concerned about the impact of deepfake technology.**

- **25 per cent of small businesses within the information and communication sector are concerned about the future viability of their business due to AI.**

Plans for the future

- **35 per cent of small businesses have plans to make further use of AI within their business in the next two years. Specifically, they plan to:**

  - Undertake a course to improve their skills / knowledge in AI tools / technology (16%)

- Explore new AI technologies to initiate new business models (13%)

- Use AI to improve customer experience (13%)

- Review internal / customer facing processes to see what could be automated (12%)

- Use AI to drive cost / budget savings (9%)

- Use AI to gain insights into their customer base (8%)

- Invest in workforce training to upskill their staff to use AI tools / technology (8%)

- Hire a consultant to enable their business to make better use of AI (2%)

- **Of the small businesses that are planning to grow rapidly in the next 12 months (increase turnover/sales by more than 20%), 60 per cent have plans to make use of AI within their business.**

- **Over a quarter (26%) of small businesses do not believe that AI is appropriate for their business. This varies by sector:**

  - 51 per cent of small businesses in construction

  - 45 per cent of small businesses in accommodation and food services

  - 34 per cent of small businesses in wholesale and retail

  - 25 per cent of small businesses in manufacturing

  - 10 per cent of small businesses in professional, scientific and technical activities

  - 5 per cent of small businesses in information and communication

RECOMMENDATIONS

A pro-growth regulatory framework

The Cabinet Office and the Department for Business and Trade should:

- Conduct a review of how best to support regulators and HMRC to effectively use AI tools within their internal and customer facing processes. The aim of this review would be how to improve their customers' experience and to reduce the volume of regulatory requirements facing SMEs. (pp.37-38)

The Department for Science, Innovation and Technology should:

- Introduce legislation that ensures that all AI created output, that is being shared without any human making changes to the output, has a watermark or disclaimer inserted that clearly outlines that the content has been generated solely by AI. This will be a duty on technology companies, which will be monitored and enforced by regulators. (p.30)

- Broaden the remit of Ofcom so that it includes regulation of cloud services in the same way that utility providers are currently regulated. Ofcom would be charged with ensuring that cloud infrastructure remains affordable, and providers do not charge excess egress fees. The provision of cloud services is an increasingly vital part of the national infrastructure, and it should be treated as such. (p.38)

- Introduce an obligation on the providers of the largest foundation models to provide information and documentation to downstream AI developers who intend to integrate the general-purpose AI model in their systems. Additionally, for these foundation model providers to be required to keep up to date technical documentation of the model for oversight purposes. (p.38)

- Build on work from the AI Safety Summit to ensure international regulator to regulator co-ordination and cooperation in sharing information and where necessary in progressing action. Future summits could also consider how to build trust in AI and involve a wider range of businesses in discussions. (p.38)

The Department for Science, Innovation and Technology and the Intellectual Property Office should:

- Request the Law Commission conduct a review into the use of Artificial Intelligence and how it relates to Intellectual Property and how best to update the Copyright, Designs and Patents Act 1988 to provide clarity that copyright protection can only sit with a human author. (p.33)

- Effectively enforce copyright laws to protect the output of authors, creators, and other publishers from misappropriation and misuse from developers of foundation models. Additionally, to establish a trustworthy and transparent system for auditing the use of copyrighted material in AI systems. (p.33)

The Department for Business and Trade should:

- Use Free Trade Agreements to secure protections on personal data and intellectual property as well as to encourage innovation and facilitating the free flow of data. (p.39)

- Consult on whether existing pieces of legislation such as the Equality Act 2010, UK GDPR and other employment laws provide necessary safeguards and sufficient meaningful human oversight to meet the use of AI in the workplace. In addition, a future consultation should also consider whether specific legislation is required to provide effective legal protections for employees, workers and employers. (p.41)

The UK Government should:

- Enhance the resources and powers of the Digital Regulation Cooperation Forum (DRCF) to maintain a co-ordinated approach to AI regulation and ensure international interoperability. The DRCF should also become the first port of call for reporting new or suspected risks with AI, without fear of enforcement. (p.39)

The Competition and Market Authority (CMA) should:

- Review and enforce data interoperability between different software that require large data input from SMEs. (p.38)

The Ministry of Justice should:

- Update existing legislation so that the use of deepfake technology with the intent to cause commercial damage is clearly illegal and victims have potential legal remedies open to them. (p.31)

UK Government and National Cyber Security Centre should:

- Review the pricing of Cyber Essentials certification as well as costs associated with annual renewal in relation to the smallest businesses and explore whether lower tier pricing or a special reduced rate could be introduced. (p.31)

Skills and AI adoption

HM Treasury should:

- Establish an independent body that looks at the current and future labour market and provides policy recommendations across Government departments. The independent body should develop short, medium and long-term labour market strategies and to consider the labour market implications of increasing AI use. (p.47)

- Increase the Corporation Tax relief for employers training low or medium-skilled employees. To encourage employers to train those with lower qualifications, the relief should remain at 100 per cent those employees with a prior Level 6 qualifications, increased to 160 per cent for those without a prior Level 6 qualification and raised to 230 per cent for those without a prior Level 3 qualification. (p.48)

The Department for Business and Trade should:

- Include information and training within their export support programmes such as the Export Academy on how small businesses can use AI in their business processes to cut down on the administration. (p.26)

- Review their use of AI when gathering/analysing data on trade to inform future policy decisions in order to encourage and enable SMEs to export. At the same time, the Department should bear in mind security concerns around sensitive/commercial data. (p.27)

- Develop a tech adoption and digital skills diagnostic tool. This would provide small business owners with advice on what business processes they could potentially automate and advice/signposting to encourage them to do so. Within this tool, there could be an assessment of a company's current and future digital skills needs and what training would help them and/or their employees. (p.44)

- Introduce digital audit vouchers for small businesses to enable more small firms to think about how they are using data and technology, vouchers should be introduced to enable them to audit their tech needs and what technology they should consider adopting. (p.44)

- Develop an Automation Fund, providing small businesses with grant funding to automate processes where access to labour is challenging. (p.44)

- Incorporate within the Help to Grow: Management course, a section on the successful use of AI within businesses. This should also be included within Help to Grow: Management Essentials, which FSB has been strongly supportive of and welcome its launch. (p.44)

- Establish similar bodies to Made Smarter for different sectors across the country – these organisations should be focused on enabling small businesses to adopt innovation and technology, including AI. (p.45)

The Department for Science, Innovation and Technology and Innovate UK should:

- Build on the approach of BridgeAI for the long term, with less focus on further research and international collaboration and more focus on effective engagement with small businesses. This must include working with pre-existing government business support infrastructure. (p.45)

The Department for Education should:

- Maintain Skills Bootcamps in the long term and develop two new ones - 'The basics of using AI for business' and 'Adopting technology within business processes.' (p.48)

- Ensure that digital related qualifications are available to all students, who wish to study them, at GCSE and A Level. In addition to computer science, the government should introduce an applied computing GCSE, which is less theoretical than computer science and focused on the digital skills required in the workplace. Both of these courses should cover the basics related to AI. (p.48)

The Institute for Apprenticeships and Technical Education should:

- Develop an apprenticeship standard at Level 2 that is reflective of the digital skills needs of a small business, including the basic use of AI. (p.49)

ARTIFICIAL INTELLIGENCE AND SMALL BUSINESSES

Artificial Intelligence (AI), and specifically generative AI, has shot into the forefront of public consciousness since the launch of AI chatbots such as ChatGPT and Google Bard in 2022. At a time of sluggish productivity and economic growth, AI has huge economic potential if widely and effectively used by small businesses.[1]

> **"Work that I was doing over three days, I can now do in one day thanks to using AI chatbots; I work much more productively."**
>
> FSB member, Business consultancy, Scotland

There is no single, universally agreed definition of AI. The House of Commons Research briefing on AI and employment law, published in August 2023, defined AI as 'technologies that enable computers to simulate elements of human intelligence, such as perception, learning, and reasoning. To achieve this, AI systems rely upon large data sets from which they can decipher patterns and correlations, thereby enabling the system to 'learn' how to predict future events. They do this by creating rules – algorithms – in response to the data, turning it into actionable information.'[2]

For the purposes of this report, we refer to AI as: generative AI (including chatbots); machine learning; predictive AI; robotics; computer vision; natural learning processing; deep learning. One in five (20%) small businesses say they use one of these technologies in their business or other technology related to AI.

> **"I use AI chatbots primarily as a Google on steroids. It really cuts down the need for a middleman when looking to gain information on a subject that I'm unfamiliar with."**
>
> FSB member, Business consultancy, Scotland

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1 FSB, Small Business Index, Quarter 4, 2023, January 2024, https://www.fsb.org.uk/resources-page/final-quarter-of-2023-saw-small-business-confidence-lose-ground-new-report-finds.html
2 House of Commons Library, Artificial intelligence and employment law, August 2023, https://researchbriefings.files.parliament.uk/documents/CBP-9817/CBP-9817.pdf

Figure 1: Use of AI amongst UK small businesses

Source: FSB, Small Business Index Survey, Q3 2023
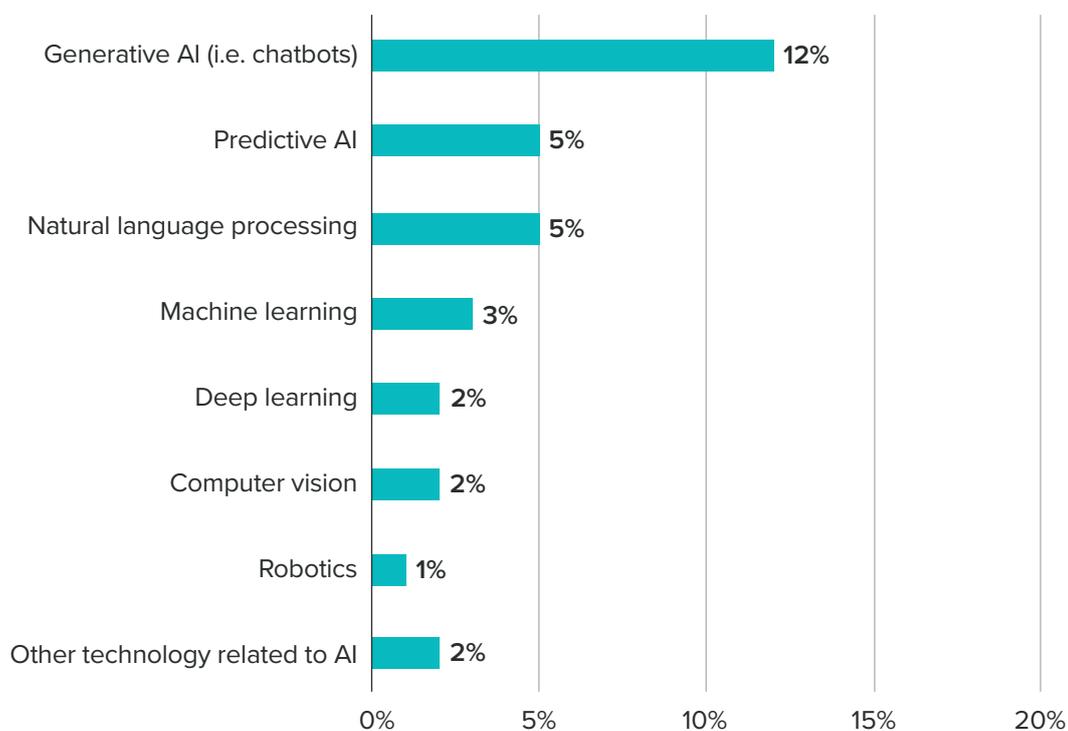
This research builds on FSB's recent research on innovation, which found that the following percentages of small businesses were using tools that may incorporate AI:[3]

- Digital accountancy software (e.g. QuickBooks, Xero): 67%

- Data analytics tools: 33%

- Customer Relationship Management (CRM) software: 24%

- eCommerce products: 19%

- Online project management tools: 19%

- Enterprise resource planning software: 4%

Generative AI, including chatbots, is the most common type of AI technology used by small businesses, with 12 per cent of small businesses stating they use it. Just over one in ten (11%) of small businesses use one of the other six technologies. FSB evidence also shows female small business owners (27%) are more likely to use AI as part of their businesses than male small business owners (16%). There are gender splits depending on the AI

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3 FSB, The Tech Tonic: Shifting the ground on tech adoption and innovation in small businesses, August 2023, https://www.fsb.org.uk/resource-report/the-tech-tonic.html

tool for example, four per cent of male small business owners use machine learning compared to one per cent of female small business owners.

Figure 2: Small business use of AI in England and Scotland

Source: FSB, Small Business Index Survey, Q3 2023
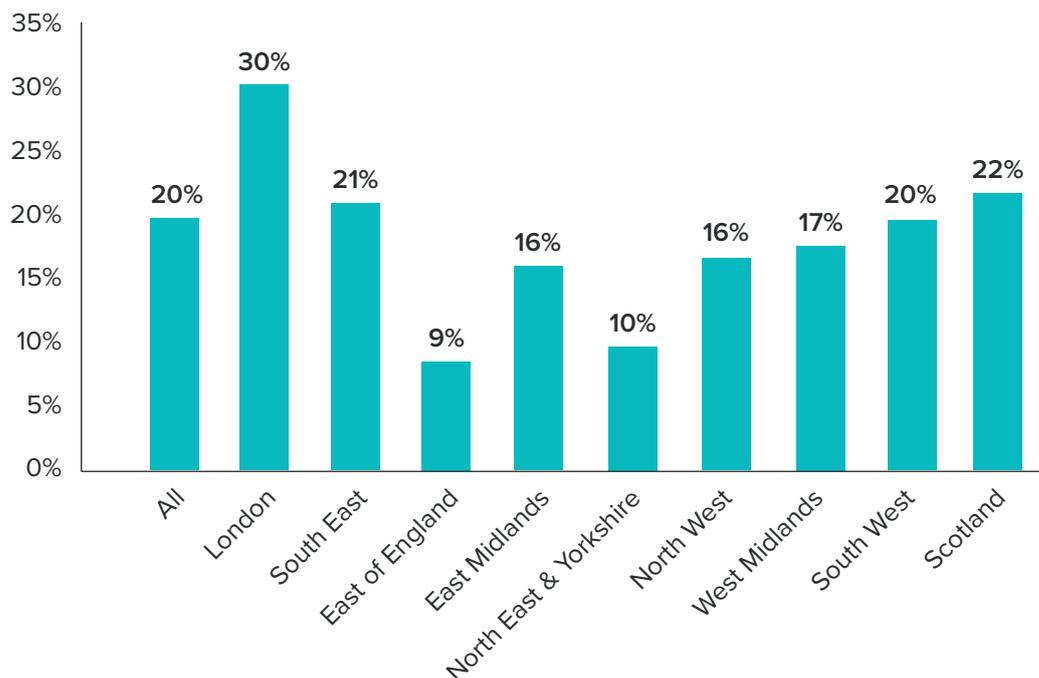
Generative AI

Generative AI is the most common type of AI technology used, with 12 per cent of small businesses saying they use it. 18 per cent of female business owners state they use generative AI for business purposes compared to 10 per cent of male business owners.

> **"I use AI chatbots mainly for marketing, press releases and website content but primarily as reference point – we don't use the copy word for word but more as a basis to look at."**
>
> FSB member, Logistics, South East England

FSB members that use AI chatbots indicated their main use of these tools were to do tasks, such as first drafts of copy or their website, press releases, and other marketing material. Generative AI tools, such as chatbots can become increasingly powerful, as they can easily be adapted for a whole range of tasks, but also their unpredictable capacity can pose significant risks.

"Often, I use an AI chatbot when responding to a tender, for instance, I've used it to do a bit of 'pump priming' and as a starter for ten. It helps trigger my thinking and is a good prompt for ideas. It's useful, but there's a lack of personality coming through."

"I find AI helpful for my research and writing copy, as it serves as a useful starter for ten. It is essential that in the blog posts I write for clients I effectively capture their voice and personality. While AI helps with initial content, it isn't ever going to replace content writers or marketing individuals. I can't see it taking away jobs, it makes things easier, taking away time-intensive aspects and making me more productive."

FSB member, Marketing and communications consultant, South West England

McKinsey's 2023 report on the economic potential of generative AI found that:[4]

"Generative AI will have a significant impact across all industry sectors. Banking, high tech, and life sciences are among the industries that could see the biggest impact as a percentage of their revenues from generative AI...About 75 percent of the value that generative AI use cases could deliver falls across four areas: Customer operations, marketing and sales, software engineering, and R&D."

Small business sectors and AI

There is a large difference in AI adoption depending on the sector that the small business operates in. The prevalence of AI use in different sectors varies hugely. There are also large differences in the different types of technology used (Figure 3). Sectors with high uptake are more likely to state that AI has enabled them to work more efficiently; for example, 62 per cent of small businesses in information and communication state this compared to eight per cent in construction.

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4 McKinsey, The economic potential of generative AI: The next productivity frontier, June 2023, https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier

Figure 3: AI UK small business use by sector

Source: FSB, Small Business Index Survey, Q3 2023

	All sectors	Manufacturing	Construction	Wholesale & retail	Accommodation and food services	Information and communication	Professional, scientific, and technical activities	Other
Machine learning	3%	1%	0%	1%	1%	13%	5%	1%
Generative AI (i.e. chatbots)	12%	8%	0%	5%	6%	17%	30%	5%
Predictive AI	5%	5%	1%	1%	2%	7%	8%	6%
Robotics	1%	5%	0%	0%	1%	0%	1%	1%
Computer vision	2%	1%	0%	0%	1%	6%	5%	0%
Natural language processing	5%	1%	0%	2%	1%	16%	11%	3%
Deep learning	2%	0%	0%	0%	0%	0%	4%	4%
Other technology related to AI	2%	0%	1%	3%	1%	2%	3%	1%
No current use of AI	44%	39%	63%	54%	53%	19%	29%	53%

Information and communication and professional, scientific, and technical activities

The opportunities for AI in the information and communication sector and professional, scientific, and technical activities sector are wide ranging, a factor recognised by SMEs in the sector. Over three fifths of small firms in information and communication say AI allows them to work more efficiently, with over half stating using AI enables them to automate. Those sectors are most likely to be enablers of AI than just adopters, with 13 per cent of firms in information and communication currently using machine learning.

Natural language processing refers to the technology that reads, understands and derives meaning from human language. In the legal professions for instance, this technology can be used to facilitate the comprehension of large and complex amounts of data. This type of technology can also be used by translation businesses. Small firms in professional, scientific, and technical activities are more likely to use complex forms for AI in comparison to other SMEs such as natural language processing (11% in comparison to 5% of all small firms).

FSB research indicates the use of AI in the information and communication sector has contributed to productivity gains, with 49 per cent of firms in the sector stating AI has benefitted their business by allowing them to develop and/or improve products and services. Despite these benefits, small firms in information and communication are more likely to have concerns about using AI (25%). One in four (25%) small businesses within the technology and communication sector are concerned about the future viability of their business due to AI. This is compared to 12 per cent on average.

Similarly, small businesses in sectors that have a strong uptake of the technologies, such as information and communication and professional and scientific, are more likely to highlight concerns. Only two per cent of those in information and communication say they have no concerns about AI. 25 per cent of small businesses in the information and communication sector say that they are concerned about the impact AI might have on the long-term viability of their sector. This trend is not applicable when it came to raising concerns about lack of skills, knowledge or understanding.

Manufacturing

Small businesses in manufacturing are one of the sectors most likely to see the business opportunities in AI. However, only five per cent of small businesses in manufacturing currently use AI in robotics. Small businesses in manufacturing are more likely to highlight concerns that they lack the resources to take advantage of AI. 40 per cent of small businesses in manufacturing say that large businesses have more resources to better utilise AI and 34 per cent of small businesses in this sector say that their workforce lack sufficient skills to utilise AI.

> "From my own career, I'm aware that companies in sectors such as logistics or manufacturing that have the budget and the technology can do fantastic things with AI around, for example, with scheduling. Unfortunately, for most SMEs in manufacturing there's just a huge knowledge gap and money gap."
>
> FSB Member, Professional, scientific and technical activities, North East England

Retail and hospitality

AI is likely to also have a significant impact on the retail and hospitality sectors, particularly retail, with the growth of e-commerce and the use of retail chatbots. However, small firms in these sectors are likely to experience greater barriers and are less likely to be early adopters of AI. 54 per cent of firms in the wholesale and retail sector and 53 per cent of firms in the accommodation and food services sector say they do not currently use AI.

For this sector and more broadly, consideration should be given to whether people want retailers to solely provide their customer services via AI. Chatbots can be an efficient way to interact with customers, however, they can also reduce the interpersonal relationships between customers and retailers especially older customers. In some cases, chatbots can go wrong, an example of this was widely reported in January 2024.[5]

AI and the future of work

A 2021 report by PwC for the then Department of Business, Enterprise and Industrial Strategy estimated:[6]

> **"Around seven per cent of existing UK jobs could face a high (over 70%) probability of automation over the next 5 years, rising to around 18 per cent after 10 years and just under 30 per cent after 20 years."**

> **"AI Chatbots can write fairly standard copy, so does this mean that junior employees are out of a job? Not necessarily – you still need people to add voice, tone, etc. Leadership could remove that bottom rung of the career ladder in many professions, but content produced by AI chatbots is increasingly being detected and less valuable. There's also the question of succession planning. How can you retain and grow good talent from the lower levels of your business if you've replaced it with AI?."**
>
> FSB member, Business consultancy, South England

> **"I don't think AI could ever learn how to inject personality and creativity into a piece of writing. These things depend on developing company culture, picking up on nuances and experience."**
>
> FSB member, Advertising and market research, West Midlands

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5 BBC, DPD error caused chatbot to swear at customer, January 2024, https://www.bbc.co.uk/news/technology-68025677

6 PwC for the Department for Business, Energy and Industrial Strategy, The Potential Impact of Artificial Intelligence on UK Employment and the Demand for Skills, August 2021 https://assets.publishing.service.gov.uk/media/615d9a1ad3bf7f55fa92694a/impact-of-ai-on-jobs.pdf

FSB research suggests use of AI by small businesses could eliminate jobs with routine tasks. In total, 15 per cent of small buisnesses state AI could eliminate administrative jobs, and this figure rises to 20 per cent for those small businesses already using AI.

The BEIS report mentioned above found:

> "Information and communications and other professional, scientific and technical services sectors are likely to see significant estimated net employment gains - which will include many highly skilled jobs linked closely to AI... jobs in programming are estimated to increase by 70 per cent as programmers are required to design innovations in AI and related technologies."

This correlates to FSB's research which shows although 29 per cent of small firms in information and communication say they plan to eliminate administrative jobs due to AI, almost half (49%) say they plan to develop and/or improve products and services.

> "Using AI has saved me somewhat on hiring a graphic designer, but AI will only go so far. We will always need graphic designers as AI is trained off output and there's nothing new from AI. It simply builds on top of what is new — there is no imagination or intuitive links. To be able to create new things and to think critically is vital for humans."
>
> FSB member, Manufacturing, West Midlands

> "The way AI chatbots and copilots are used by developers; I think it'll replace the need for apprentice developers. I started my career as a software developer apprentice and believe that this route will be harder in future. The entry point to development is getting higher and higher."
>
> FSB member, Technology Consultancy, Scotland

> "Using an AI chatbot is a bit like an efficient intern that you don't need to train and less frustrating...I'm not sure AI will ever be able to completely replace the work of an architectural designer. If we consider the substantial building safety regulations we must comply with, how frequently these regulations are updated and the amount of CPD architectural designers have to do, it is fundamental that people trust the design of a building, that human oversight is critical if we want to maintain trust. Architectural designers must put their name to a design, they need to do 40 hours of CPD a year to prove their competence, how can you build that trust in AI?"
>
> FSB member, Architecture and Design, North West England

Small business growth

In July 2023, Google estimated AI tools could generate over £400 billion for the UK economy by 2030 and save the average worker over 100 hours a year.[7] Small businesses that plan to grow (increase their turnover/sales by over 20% per annum in the next 12 months) are more likely to be planning to use AI in the next two years (Figure 4).

Of the businesses planning high growth, only 32 per cent say either that AI is not appropriate for their business, or they are not planning on undertaking any measures in relation to AI. This is compared to 51 per cent of all small businesses. This evidence provides an interesting snapshot, indicating higher adoption of AI could lead to high small business growth.

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7 Google, Unlocking the AI-powered opportunity in the UK, July, 2023, https://blog.google/around-the-globe/google-europe/unlocking-the-ai-powered-opportunity-in-the-uk/

Figure 4: UK small businesses intentions to use AI in next two years compared to growth plans in the next 12 months

Source: FSB, Small Business Index Survey, Q3 2023

- ○ SMEs planning to grow by more than 20% in the next 12 months
- ○ SMEs planning to grow up to 20% in the next 12 months
- ○ SMEs planning to remain about the same size in the next 12 months
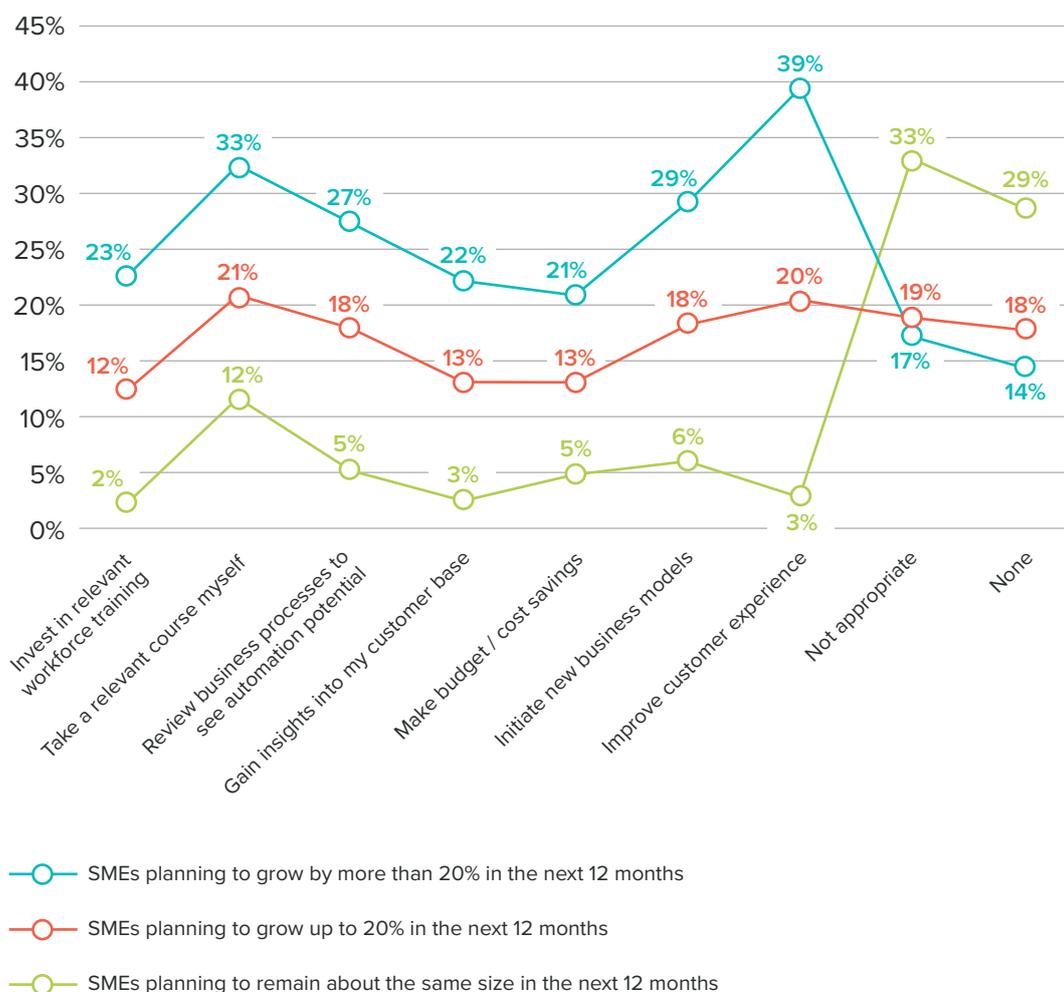
Untapped potential

A total of 55 per cent of small businesses see that AI has potential benefits for their business, while 45 per cent of small businesses say that they either were not aware of any potential benefits of AI or that they did not see any benefits for their business (Figure 5). The number of small businesses saying that they do not know is high, indicating perhaps a considerable knowledge gap.

Figure 5: UK small businesses' views on the benefits AI could bring to their business

Source: FSB, Small Business Index Survey, Q3 2023
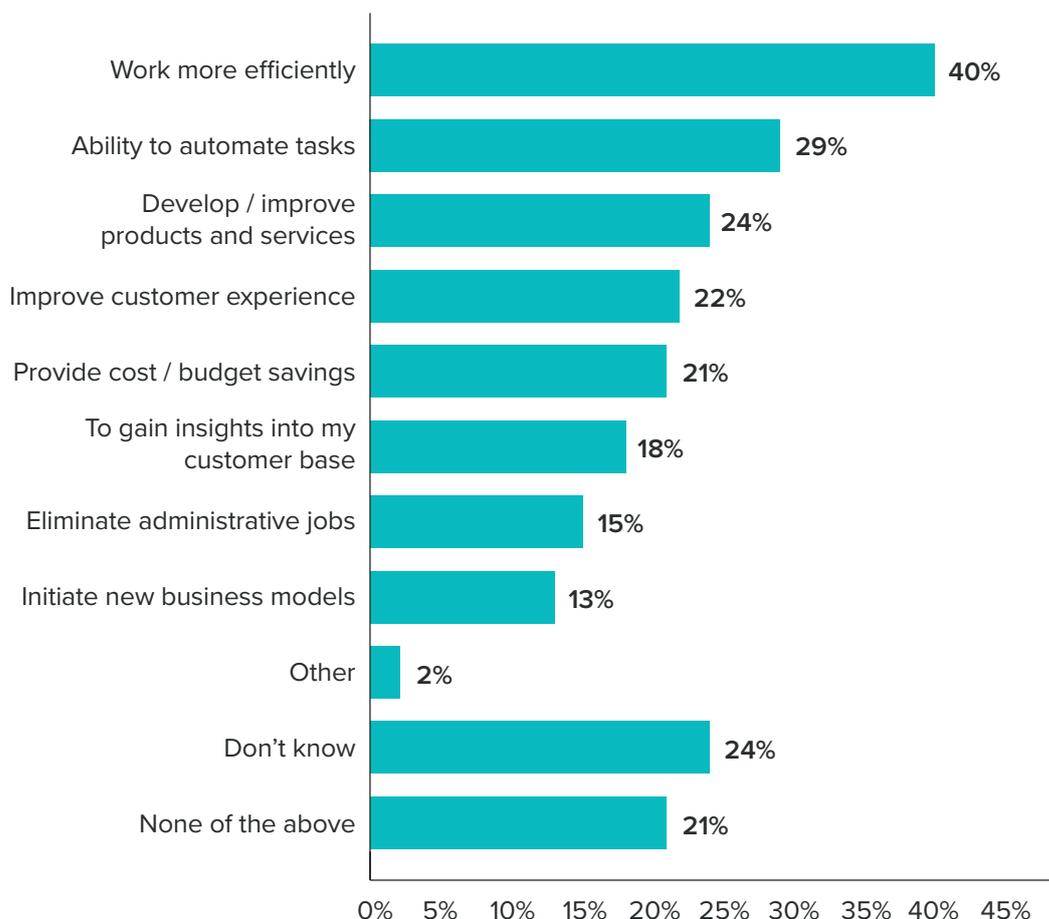
Our research shows that 35 per cent of small businesses say they plan to take some action in relation to AI in the next two years, with 26 per cent stating AI is not appropriate for their business. Future plans in relation to AI differ depending on whether the business already uses AI or not (Figure 6).

Figure 6: Small businesses AI plans, current AI users compared with those not currently using AI

Source: FSB, Small Business Index Survey, Q3 2023

	Non AI users	AI users	All small firms
Take a course to improve my skills	9%	23%	16%
Improve customer experience	3%	21%	13%
Initiate new business models	2%	21%	13%
Review the potential to automate processes	3%	19%	12%
Drive cost / budget savings	2%	15%	9%
Gain insights into my customer base	2%	14%	8%
Invest in training to upskill my staff	2%	12%	8%
Hire a consultant	1%	3%	2%
Don't know	13%	15%	15%
AI is not appropriate for my business	42%	13%	26%
None of the above	31%	20%	25%

Legend: Non AI users, AI users, All small firms

Those small businesses who have plans in place, again seem to be those in the information and communication sector or those in professional, scientific, and technical activities. For instance, 31 per cent of those in information and communication and 30 per cent of those in professional, scientific, and technical activities say they will undertake a course to improve their knowledge/skills. 24 per cent of those in information and communication say that they will use AI to improve their customer

experience. Just over half (51%) of those in construction and 45 per cent of those in accommodation and food services say that AI is not appropriate for their business.

It is interesting that 13 per cent both see potential of using AI to initiate new business models and also 13 per cent are planning to do so. In other areas there is a gap between seeing potential and planning to realise this opportunity. For instance, 22 per cent of small businesses can see AI having potential to improve their customer's experience but only 13 per cent are planning on using AI to improve customer experience.

Realising potential

The main potential benefit small businesses see with AI will require them to incorporate the technology within their business processes. 40 per cent of small businesses say the main potential with AI is in relation to working more efficiently and 29 per cent say the ability to automate tasks.

FSB's report, The Tech Tonic, found of those small businesses considering introducing new or significantly improved processes, time and uncertainty of how to implement were particular barriers.[8] In addition, this group are more likely than average to say that more support to help implement (50% to 28% on average) or better information, advice and guidance (42% to 26% on average) would incentivise them to innovate. As well as more capacity to implement (37% to 23% on average).

These findings correlate with other studies. A historical study by the Centre for Economic Policy Research found that:[9]

> **"The need to reorganise production to make efficient use of new technologies — a feature common to many new technologies — can lead to both slow technology adoption and to aggregate productivity gains that materialise slowly."**

However, if firms are able to incorporate AI within their processes, the potential rewards could be great. For instance, AI can help automate import/export processes such as inventory management, demand forecasting, as well as streamlining and simplifying customs clearance processes. International trade has a wide range of benefits for businesses. Yet, the administration of the processes can be too much for small firms. FSB's 2023 Customs Clearance report found that the top reasons for

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8   FSB, The Tech Tonic: Shifting the ground on tech adoption and innovation in small businesses, August 2023, https://www.fsb.org.uk/resource-report/the-tech-tonic.html

9   Juhász, R., Squicciarini, M., and Voigtländer, N. (2020), Technology adoption and productivity growth: Evidence from industrialisation in France, The Centre for Economic Policy Research, https://cepr.org/voxeu/columns/technology-adoption-and-productivity-growth-evidence-industrialisation-france

stopping are the volume of paperwork (56%), overall costs (49%) and supply chain or logistical issues (29%).[10] AI could enable small businesses to overcome these barriers.

> "Our primary business is import/export, particularly with Germany. We changed our processes a few years back to incorporate AI to reduce the amount of manual data entry. The payback has been fantastic. It's really put us ahead of our competitors and boosted our productivity. We also have released our staff from the more mind-numbing tasks and enabled them to focus on the more 'human' aspects of their work."
>
> FSB member, Logistics, West Midlands

Despite the potential benefits of AI, small businesses will not naturally pick up this technology within the timeframes required to reverse the decline in productivity. As the leading academic on diffusion of innovation put it:[11]

> "Getting a new idea adopted, even when it has obvious advantages, is difficult. Many innovations require a lengthy period of many years from the time when they become available to the time when they are widely adopted."

Recommendations

The Department for Business and Trade should:

- **Include information and training within their export support programmes such as the Export Academy on how small businesses can use AI in their business processes to cut down on the administration.** FSB data shows that the main reasons SMEs stop international trade, beyond cost, are related to barriers the volume of paperwork and supply chain or logistical issues.[12] AI has a proven ability to address these issues and its use should be encouraged.

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10 FSB, Customs Clearance: The road to seamless trade for small businesses, March 2023, https://www.fsb.org.uk/resource-report/customs-clearance.html
11 Rogers, E. M. (2003), Diffusion of Innovations, 5th edition, New York: Free Press, p.1
12 FSB, Customs Clearance: The road to seamless trade for small businesses, March 2023, https://www.fsb.org.uk/resource-report/customs-clearance.html

- **Review DBT's use of AI when gathering and analysing data on trade to inform future policy decisions in order to encourage and enable SMEs to export. At the same time, the Department should bear in mind security concerns around sensitive and commercial data.** As the OECD highlights, AI can improve the analytical capacities of governments and enable them to make better decisions with trade policy.[13] For instance, this could include the use of data from ports, financial transactions, in-country data and Google Trend search indicators in order to identify bottlenecks and "nowcast" aggregate services trade.

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13 OECD, Artificial Intelligence and international trade, April 2022, https://www.oecd.org/publications/artificial-intelligence-and-international-trade-13212d3e-en.htm

A PRO-GROWTH REGULATORY FRAMEWORK

AI is a powerful tool; it is likely to be the biggest transformative tool of this generation. This change is happening at pace so there is an urgent need to implement proportionate frameworks to ensure the right balance between opportunity and risk.

Small businesses and the self-employed, whether they are adopters of AI or creators of AI, are vulnerable in comparison to the world's technology conglomerates. Due to the rapidly evolving nature of AI and the vulnerability faced by smaller firms – the issue of regulation and small firms should be a key priority for policymakers.

> **"A lack of trust in AI is a huge blocker to higher uptake. Sometimes the software that plays by the rules isn't as good as others, but I place huge importance on tools that I can trust."**
>
> FSB member, Graphic design, Scotland

AI and security

31 per cent of all small businesses say they are concerned about their ability to manage AI securely and/or manage the security risks. This figure rises to 34 per cent for those small firms that state they use AI but falls to 23 per cent for those small firms that state they do not use AI.

FSB's *Cracking the Case: Uncovering the cost of small business crime* report found over two thirds (72%) of small businesses state that they have experienced cybercrime in the last two years.[14] As highlighted in Cracking the Case, fraud quickly evolves in its nature and sophistication, with fraudsters increasingly using AI technology to operate. Economic crime already costs the UK economy at least £290 billion per year.[15] We are only just seeing the start of fraudsters using AI and this figure could increase if this potential threat is not addressed.

Technology that manipulates or alters visual or auditory information to create convincing fake content, is an area of increasing concern. 24 per cent of all small businesses say they are concerned over the impact of deepfakes on their business brand and/or reputation. 30 per cent of small businesses in wholesale and retail say they are concerned about the impact

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14 FSB, Cracking the Case: Uncovering the cost of small business crime, December 2023, https://www.fsb.org.uk/resource-report/cracking-the-case-uncovering-the-cost-of-small-business-crime.html
15 House of Commons debate, Economic Crime: Law Enforcement, July 2022, https://hansard.parliament.uk/commons/2022-07-07/debates/D08E9A46-5BA8-4DA8-8E29-025C312722AE/EconomicCrimeLawEnforcement

of deepfake technology. According to one estimate, the proportion of fraud cases that involved deepfake technology has increased from 1.2 per cent to 5.9 per cent between 2022 and Q1 2023 in the UK.[16]

Deepfake technology also poses risks in relation to business fraud. The technology gives potential fraudsters the possibility to look and sound like anyone, including those authorised to approve payments from the company.[17] Potential fraud schemes could include more sophisticated versions of phishing and business email compromise scams, though harder to detect.

The Government's Fraud Strategy, published Spring 2023, identified that:[18]

> **"Fraudsters are likely to become ever more adept at harnessing technology and identifying vulnerabilities, making frauds much harder for victims to spot. Technological advances, such as deepfakes and increasingly immersive online environments, can leave users more vulnerable and give rise to new types of fraud related threats by presenting fake people or information in a way that is impossible to distinguish from the real thing."**

FSB supports the introduction of this strategy, which also outlined the commitment to launch a cross government anti-fraud public awareness campaign on how to avoid and respond to fraud and scams. The Government's guidance and information campaigns must ensure that it is keeping pace with this changing nature and sophistication.

> **"The genie is out of the bottle in terms of trying to legislate against the technology – you might as well try and legislate against the typewriter. It's all about how it is used though and ensuring that it isn't used in ways that are fraudulent or reputationally damaging."**
>
> FSB member, Telecommunications, South East England

FSB members have highlighted the need for human oversight of AI output. The risks related to AI hallucinations are well documented. AI hallucinations are incorrect or misleading results that AI models generate. These can be

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16 Sumsub, New digital fraud statistics in the UK and continental Europe: forced verification and deepfake cases multiply at alarming rates, June 2023, https://sumsub. com/newsroom/new-digital-fraud-statistics-in-the-uk-and-continental-europe-forced-verification-and-deepfake-cases-multiply-at-alarming-rates/

17 For instance: Finextra, Deepfake fraud: the rising threat in financial crime, available at: https://www.finextra.com/the-long-read/844/deepfake-fraud-the-rising-threat-in-financial-crime

18 Home Office, Fraud Strategy, June 2023, https://www.gov.uk/government/publications/fraud-strategy

caused by a variety of factors, including errors within the training data. An over-reliance on the output from AI could lead to legal difficulties if, for instance, the AI gives misleading information about regulations.

> **"There is a lack of regulation with AI. When there is no human oversight of AI there really needs to be a declaration that it's drafted by AI."**
>
> FSB member, Architecture and Design, North West England

> **"AI is very helpful with our R&D operations. It helps (up to a point) us review clinical papers, with our quality assurance and compliance. However, with all of this it is essential that we still include a human element. The main risk with this is an over-reliance of AI and a danger of human laziness. Hallucinations with AI are concerning so it is essential that AI produced content has human oversight."**
>
> FSB member, Health and social care, South East England

It may be helpful for organisations to make it clear when they are using AI to improve transparency, particularly for the purpose of maintaining public trust, as well as to help regulators appropriately provide oversight.

Recommendations

The Department for Science, Innovation and Technology should:

- **Introduce legislation that ensures that all AI created output, that is being shared without any human making changes to the output, has a watermark or disclaimer inserted that clearly outlines that the content has been generated solely by AI. This will be a duty on technology companies, which will be monitored and enforced by regulators.** Government should consult to ensure this is introduced in a way that is not burdensome to users of AI and does not put people off from using AI. Telling the difference between AI and human created output is increasingly difficult. For example, one study found that respondents could identify the AI-generated content about 55 per cent of the time. If we want to build trust in this technology, it should be the case that AI generated output is easily identifiable. Adding a disclaimer or watermark by default onto for example images and automated emails would be relatively straightforward for AI companies. When someone has pasted text, for instance, from a chatbot, the company that have developed that chatbot should ensure that an automatic disclaimer appears when it is pasted.

UK Government and National Cyber Security Centre should:

- **Review the pricing of Cyber Essentials certification as well as costs associated with annual renewal in relation to the smallest businesses and explore whether lower tier pricing or a special reduced rate could be introduced.** Research from FSB has shown that only six per cent of small businesses have a recognised cyber security standard.[19] This is not surprising given that the costs are disproportionately high for small businesses. We support the latest DSIT review into Cyber Essentials and in particular the recommendation to look again at the scheme's pricing structure. The material in the course should be kept under regular review given the growing concern about the threat posed by AI.

The Ministry of Justice should:

- **Update existing legislation so that the use of deepfake technology with the intent to cause commercial damage is clearly illegal and victims have potential legal remedies open to them.** For instance, updating provisions within the Defamation Act 2013 and the Fraud Act 2006 to include the use of deepfake technology with the intention to cause reputational damage or commit fraud. The increasing use of deepfake technology to cause reputational damage and to commit fraud is highly concerning. Updating and clarifying existing laws to combat the threat seems a more appropriate response than the outright banning of technologies, though the latter could be considered if the former is not successful.

Intellectual Property Rights

FSB research highlights small business concerns towards AI, 35 per cent of small businesses that currently use AI say they are concerned about AI technology abusing their Intellectual Property Rights (IPR). From our qualitative research, we have found that this concern has frequently discouraged small business owners from using AI.

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19 FSB, Cracking the Case: Uncovering the cost of small business crime, December 2023, https://www.fsb.org.uk/resource-report/cracking-the-case-uncovering-the-cost-of-small-business-crime.html

> "AI chatbots and copilots are highly useful tools, but my concerns are that they'll breach my privacy and IP, which prevents me from using it so much. There is still a strong need for patents and other intellectual property if we want people to continue to develop new ideas."
>
> FSB member, Technology consultancy, Scotland

> "I'm hugely concerned about the use of AI technology. The artistic community has been sucked in and their copyright has been abused. The businesses that are able to use AI tools can't be handcuffed to ever increasing cost. My teenager can't tell the difference between what is real and fake due to the increasing prevalence of deepfake. We need to introduce rules here sharpish."
>
> FSB member, Professional, scientific and technical activities, North East England

Intellectual Property (IP) incentivises businesses and individuals to develop new ideas. Allowing AI to bypass IP rights could reduce creative output. Technology companies can create AI that respects these rights, but small AI firms may struggle to legally gather enough data compared to larger companies. As the House of Commons Culture, Media and Sport Committee has indicated, the Government should work with small AI developers:[20]

> "Who may find difficulties in acquiring licences, by reviewing how licensing schemes can be introduced for technical material and how mutually beneficial arrangements can be struck with rights management organisations and creative industries trade bodies."

There are therefore anti-competitive issues to be considered. For those small businesses that use AI, clarity in UK law of the ownership of IP outputs is essential. Currently under the Copyright, Designs and Patents Act 1988, *"computer generated works"* are capable of copyright protection, with the first owner being the individual who made the *"arrangements necessary for the creation of the work."*[21] The lack of any express requirement for copyright protection to sit under a human author and the Act's narrow wording leaves open the possibility for arguments to be made in favour

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20 Culture, Media and Sport Commons Committee, Connected tech: AI and creative technology, August 2023, https://publications.parliament.uk/pa/cm5803/cmselect/cmcumeds/1643/report.html
21 Copyright, Designs and Patents Act 1988, https://www.legislation.gov.uk/ukpga/1988/48/contents

of granting copyright protection even for purely AI-generated works. Additionally, determining who is responsible for the creation arrangements remains unclear. These doubts will tend to stifle innovative use of AI tools.

Recommendations

The Department for Science, Innovation and Technology and the Intellectual Property Office should:

- **Request the Law Commission conduct a review into the use of Artificial Intelligence and how it relates to Intellectual Property and how best to update the Copyright, Designs and Patents Act 1988 to provide clarity that copyright protection can only sit with a human author.** The review should specifically examine two interconnected issues and suggest solutions. Firstly, whether current IP rights are sufficient to cover the outputs generated from AI systems. Secondly, whether small businesses are likely to be increasingly unable to profit from AI-generated outputs that they have commissioned due to imbalanced contracts. The review should look to clarify the status and ownership of the output of AI systems including the possibility of creating a new IP right as well as considering how best to counteract restrictive contractual terms relating to AI system usage.

- **Effectively enforce copyright laws to protect the output of authors, creators, and other publishers from misappropriation and misuse from developers of foundation models. Additionally, to establish a trustworthy and transparent system for auditing the use of copyrighted material in AI systems.** AI systems can be developed that are within intellectual property laws. If we want to encourage creativity and new ideas, it is important that these rights are respected. DSIT should also work with small AI developers to enable them to use data in an ethical and effective way.

Running costs and AI infrastructure

Of the small businesses that currently use AI, 37 per cent say that large businesses have more resources to better utilise AI. This is reflective of the estimates of uptake. For instance, the Government in 2022, found that: 68 per cent of large companies, 34 per cent of medium sized companies and 15 per cent of small companies have adopted at least one AI technology.[22] This research found that the companies that had adopted AI spent a total of £16.7 billion on AI technologies as well as a total of £46.0 billion on labour

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22 Department for Digital, Culture, Media & Sport, AI activity in UK businesses, January 2022, https://www.gov.uk/government/publications/ai-activity-in-uk-businesses/ai-activity-in-uk-businesses-executive-summary

associated with the development, operation or maintenance of those technologies. It estimated that costs are going to increase hugely in the years to come.

The adoption of AI and the development of AI technology requires large resources, especially in terms of using the relevant infrastructure, including the cloud and the large amount of computing power (compute) that is required. The Government commissioned, independent review of compute found that the UK went from 3rd in global compute capacity in 2005, to 10th by 2022 and identified several issues for businesses that use compute:[23]

> "Some stakeholders engaged by the review have reported that commercial cloud can, in some instances, result in lock-in effects and high data extraction costs, making it difficult for users to move between services. Furthermore, the use of public compute often includes a requirement to publish results. This can act as a barrier to some businesses adopting compute, particularly where intellectual property protection is a major concern. Some businesses also noted that the costs of data management and governance can be an inhibitor for those who might want to use more substantial computing resources."

Tackling these issues related to compute infrastructure is of paramount importance if we want to enable small businesses to make more cutting-edge AI advances as well as encouraging a broader uptake of the technology. The announcement at the 2023 Autumn Statement that the UK will invest £500 million to help "universities, scientists and start-ups have access to the compute power they need" is a welcome start.[24]

If small firms want to develop and use AI functions specific for their business, it is a pre-requisite to be on the cloud. It is broadly positive that 43 per cent of small businesses say they use cloud computing. It is vitally important that small firms make the most of the opportunities presented from being on the cloud and use it in an effective way.

23 Department for Science, Innovation & Technology, Independent Review of The Future of Compute, March 2023, https://www.gov.uk/government/publications/future-of-compute-review/the-future-of-compute-report-of-the-review-of-independent-panel-of-experts
24 HM Treasury, Autumn Statement 2023, November 2023, https://www.gov.uk/government/publications/autumn-statement-2023

> "As with all cloud computing projects, AI services can run up significant bills if not managed carefully. A lot of AI development work is exploratory and, by design, without clearly defined goals. This can often lead to runaway projects and bills that ultimately don't provide a tangible business benefit. And as we know, cloud service providers are not that helpful when it comes to cost management! It is therefore very important for organisations to get guidance from experienced professionals, either through recruitment or external specialists, to ensure AI projects result in success."
>
> FSB member, Information and Communications, West Midlands

According to research published in September 2023, SMEs in the UK spent almost 2 per cent of their turnover on cloud services in 2022, the equivalent of £4 billion.[25] The study found that SMEs on average anticipated a 10 per cent rise in cloud-computing costs this year. This is despite 28 per cent of SMEs reporting no benefits from moving to the cloud and 25 per cent saying the move was more negative than positive. In response to rising costs, 47 per cent of small businesses planned to reduce their use of cloud-based services in 2023 and 36 per cent said they would reduce the amount of data held in the cloud.

Competition and regulation enforcement

While most small businesses will be adopters of AI rather than the developers of AI systems, FSB would like to see the encouragement of strong competition in the sector.

Competition increases consumer choice as well as having the wider economic benefits of improved innovation and productivity and hence economic growth. Secondly, small technology firms are clearly concerned about the impact AI will have on their sector. Almost two in five (39%) small businesses in the technology and communication sector say they are concerned that large businesses have more resources to better utilise AI. Meanwhile, one quarter (25%) of small businesses in this sector say that they are concerned that AI will reduce the long-term viability of their business.

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25 Beaming, Making the cloud work for UK businesses, September 2023, https://www.beaming.co.uk/press-releases/cloud-computing-now-as-popular-as-on-premise-it-for-uk-smes/

> **"The tech sector is very polarised – large businesses can see the rewards with AI, but the small businesses are a lot more nervous, they are particularly worried about their future job roles."**
>
> FSB member, Technology consultancy, Scotland

The Competition and Market Authority's review of Foundational Models is an insightful piece of research that identifies several concerns related to ensuring that there is strong competition within the development of AI.[26] The principles that they outline, which will guide their approach, are welcome.

As the CMA outline, interoperability is of paramount importance for small businesses, both for those small businesses adopting AI and those creating AI. With huge amounts of data being used within AI-related infrastructure, as well as the technology and software that incorporates AI, it is essential that small businesses are not locked into certain services. Small businesses should be able to change their provider and transfer their data from one technology to another in a relatively straight-forward fashion. This is crucial to enable consumer choice and competition.

As the OECD has indicated, the exact impact of AI on competition is still somewhat uncertain:[27]

> **"It is clear that competition policy will have an important role to play in managing the potential dark sides of AI technology for consumers, businesses that may be harmed by AI-enabled anticompetitive conduct, and the economy more broadly."**

The OECD also outlines that despite challenges *"it is clear that competition authorities' toolboxes are not empty."* Nevertheless, research from IPPR has outlined that they do not believe that the CMA has the capacity or the powers to effectively monitor and act in this area.[28] It is vital that policymakers ensure that competition authorities have the necessary resources to carry out their crucial function.

AI sandboxes mainly benefit well-resourced companies, but it's important

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26 Competition and Markets Authority, AI Foundation Models: Initial report, September 2023, https://www.gov.uk/government/publications/ai-foundation-models-initial-report

27 OECD, AI in Business and Finance, September 2021, https://www.oecd-ilibrary.org/sites/3acbe1cd-en/index.html?itemId=/content/component/3acbe1cd-en#section-d1e9799

28 IPPR, Artificial Intelligence for public value creation: Introducing three policy pillars for the UK AI summit, October 2023, https://www.ippr.org/research/publications/ai-for-public-value-creation

for regulators to support a wide range of businesses in AI adoption. More educational resources and clear, non-technical guidance could help, especially for smaller businesses. It's vital for firms under multiple regulators to have consistent rules and understand minimum requirements for AI compliance. Additionally, a system for reporting AI risks without enforcement fears is crucial, as small businesses often over-comply due to such concerns, diverting time from other business needs.

Recommendations

The Cabinet Office and the Department for Business and Trade should:

- **Conduct a review of how best to support regulators and HMRC to effectively use AI tools within their internal and customer facing processes. The aim of this review would be how to improve their customers' experience and to reduce the volume of regulatory requirements facing SMEs.** The review should lessen regulators' operational and delivery burdens so they can focus their time and resources towards effective engagement with SMEs. It should also consider how AI could reduce the reporting burden on SMEs, through integrating data systems between different government departments and using tools such as text mining to streamline and rationalize regulations. The review should also consider the resources, including the upfront cost and investment in training, that regulators require in order to bring forward these changes. 39 per cent of small businesses in DBT's Small Business Survey said that regulations and red tape are a barrier to business success and growth.[29] FSB has also found that an average small business owner spends 52 hours a year on tax compliance at a cost of £4,100.[30]

The Department for Science, Innovation and Technology should:

- **Broaden the remit of Ofcom so that it includes regulation of cloud services in the same way that utility providers are currently regulated. Ofcom would be charged with ensuring that cloud infrastructure remains affordable, and providers do not charge excess egress fees. The provision of cloud services is an increasingly vital part of the national infrastructure, and it should be treated as such.** The CMA has recently opened an investigation into cloud service provision, following a market study performed by Ofcom,

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29 Department for Business and Trade, Small Business Survey 2022: businesses with employees, November 2023, https://www.gov.uk/government/statistics/small-business-survey-2022-businesses-with-employees

30 FSB, A Duty to Reform: Making tax work for small businesses in a digital world, October 2021, https://www.fsb.org.uk/resource-report/a-duty-to-reform.html

which *"identified features that make it difficult for UK businesses to switch and use multiple cloud suppliers."*[31] This investigation is due conclude by April 2025. In the meantime, the details of these provisions should be developed so this can be implemented when CMA publish their conclusions and depending on the outcome of the investigation. This level of regulation could be implemented in a limited way to start with.

- **Introduce an obligation on the providers of the largest foundation models to provide information and documentation to downstream AI developers who intend to integrate the general-purpose AI model in their systems. Additionally, for these foundation model providers to be required to keep up to date technical documentation of the model for oversight purposes.** Providers of the largest foundation models should also have an obligation to document and report information about serious incidents, as well as a requirement to ensure an adequate level of cybersecurity protection. This should be enforced by the Digital Regulation Cooperation Forum (DRCF). This level of regulation is required to ensure that AI is used ethically and without unintended, potentially dangerous consequences.

- **Build on work from the AI Safety Summit to ensure international regulator to regulator co-ordination and cooperation in sharing information and where necessary in progressing action. Future summits could also consider how to build trust in AI and involve a wider range of businesses in discussions.** International cooperation in regulating AI is of paramount importance. As many of the main companies involved in the development of AI are multi-national corporations and the flow of data is international, this requires strong international co-ordination. The UK's AI Safety Summit in November 2023 is a good example of the leadership role the UK can play.

The Competition and Market Authority (CMA) should:

- **Review and enforce data interoperability between different software that require large data input from SMEs.** Given the importance of data for innovation, encouraging more firms to use the latest products that bring most value for them is crucial. This is not achievable if small businesses are unable to change software products as it is too difficult for them to move their data and they are effectively locked into specific platforms at ever increasing prices that eat into their margins. The CMA should enable small businesses to switch between different software products, including those that incorporate AI technology, without significant difficulties.

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31 Competition and Markets Authority, Cloud services market investigation, available at https://www.gov.uk/cma-cases/cloud-services-market-investigation

The UK Government should:

- **Enhance the resources and powers of the Digital Regulation Cooperation Forum (DRCF) to maintain a co-ordinated approach to AI regulation and ensure international interoperability. The DRCF should also become the first port of call for reporting new or suspected risks with AI, without fear of enforcement.** As suggested by the IPPR, an advanced AI monitoring hub, that has the technical infrastructure to allow it to query usage data, assess firms training and safety methods and exchange information with existing digital regulators could be built into the DRCF's functions.[32] While maintaining a vigilant eye on the use of AI is important, regulators should be encouraged to co-ordinate and not duplicate efforts. This will make it easier for small firms to comply with necessary regulation.

The Department for Business and Trade should:

- **Use Free Trade Agreements to secure protections on personal data and intellectual property as well as to encourage innovation and facilitating the free flow of data.** The UK-Singapore Digital Economy Agreement is a good example of a trade agreement that enabled the two countries to maximise the opportunities related to AI and to minimise the associated risks. This approach should be continued in future trade agreements.

Artificial Intelligence and employment law

AI clearly poses potential benefits to productivity; however, AI also comes with a range of complex risks, challenges, and considerations whether they be legal, operational, moral, or philosophical. As AI becomes more advanced, it could lead to less and less human input within the workplace. It is our view that employers should retain a degree of meaningful human oversight of AI systems within the employment relationship. The creation of safeguards can build trust in AI, protecting both workers and small business employers.

FSB research shows that employers are slightly more likely to state they use machine learning than those that do not employ staff (5% vs 3%). Machine Learning and the use of algorithms can also impact the workplace, with machine learning having the ability to imitate intelligent human behaviour. This includes the use of image recognition, which assesses individuals' tone or facial movements.

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32 IPPR, Artificial Intelligence for public value creation: Introducing three policy pillars for the UK AI summit, October 2023, https://www.ippr.org/research/publications/ai-for-public-value-creation

Employment is a personal relationship, often more so within small and micro businesses. In 2020, Acas published, My boss the algorithm: an ethical look at algorithms in the workplace. The paper recommended:[33]

> **"Algorithms should be used to advise and work alongside human line managers but not to replace them. A human manager should always have final responsibility for any workplace decisions."**

The culture found within small firms is distinct from larger organisations partly due to the reduced bureaucracy and bonds of trust fostered in an environment where autonomy is often encouraged. Many FSB small employers report that their staff are empowered to share ideas and influence key decisions. Previous FSB research from 2018 found a "high willingness amongst small business innovative employers (86%) to take up innovations suggested by employees, which is a key indicator of employee engagement".[34] The growth in AI should not impede small business employee engagement. In the case of employment decisions there needs to be a human between the outcomes generated from AI and the final decision made by the employer. The requirement to ensure meaningful human oversight is recognised by FSB members:

> **"It is important to recognise the limits of AI – it's not going to take over. People skills are increasingly important and can't be replicated. AI can't replicate that ability to develop trusting relationships. It also can't duplicate human instincts and experience."**
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> FSB member, Logistics, South East England

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33 ACAS, My boss the algorithm: an ethical look at algorithms in the workplace, March 2020, https://www.acas.org.uk/my-boss-the-algorithm-an-ethical-look-at-algorithms-in-the-workplace

34 FSB, Spotlight on Innovation, 2018, https://www.fsb.org.uk/resources-page/innovation-report-final-pdf.html

> "We are quite far off from developing the human ability to trust within AI. There is still a need for critical thinking and developing solutions based on my own experience. In the course of negotiating, it is important to go with gut and instinct and experience. Developing trustful relationships and having emotional intelligence are crucial to achieving outcomes, I don't think an AI can learn that."
>
> FSB member, Business consultancy, Scotland

Human oversight is also regarded as an important safeguard by worker representatives, the TUC states "it is crucial to maintain some degree of human involvement in decision making at work".[35] Building trust in automated outcomes will safeguard equality, trust and fairness within the workplace. Policymakers need to actively consider whether existing workplace legal and regulatory frameworks are designed with AI in mind.

Recommendations

The Department for Business and Trade should:

- **Consult on whether existing pieces of legislation such as the Equality Act 2010, UK GDPR and other employment laws provide necessary safeguards and sufficient meaningful human oversight to meet the use of AI in the workplace. In addition, a future consultation should also consider whether specific legislation is required to provide effective legal protections for employees, workers and employers.** Future legislation should provide a balance between the advancement of innovation and ensuring the appropriate levels of protection. In order to achieve this, policymakers should focus on safeguards centred on meaningful human oversight.

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35 TUC, Dignity at work and the AI revolution, March 2021, https://www.tuc.org.uk/ research-analysis/reports/dignity-work-and-ai-revolution

SKILLS AND AI ADOPTION

Regulation of AI is an urgent factor to address, building trust in the technology is vital if we want to encourage adoption. This chapter identifies one of the biggest barriers in AI adoption – skills. 46 per cent of small business owners say they themselves or their workforce lack the knowledge and/or skills to utilise AI successfully. A focused effort from policy makers is required to encourage and enable small firms to make effective use of AI technology.

Small business owners

Our research shows that 32 per cent of small business owners say they lack knowledge as to how AI can benefit their business and 26 per cent of say they 'don't have sufficient skills to utilise AI'. The reason that the diffusion of new technologies and innovations can be a slow process is that changing businesses processes is a difficult and challenging task for any business leader. Nevertheless, understanding how to incorporate AI within a business is vital if that business wants to maximise the opportunity.

> **"The AI debate doesn't adequately cover how to improve productivity or how it will help individual business owners that don't have large corporate IT departments sitting behind them. People often underestimate how complex it is to implement a large business change. The new tech often gets deployed and 'bolted into' existing processes, but little thought is given to how to really leverage this."**
>
> **"A common but flawed attitude is that 'our people just need to get used to the fact that this is new way'. Embedding culture change is really difficult. There is a lack of training related to how to integrate AI within your business – not much traffic or conversation on potential pitfalls or on managing your business and people through the change related to implementing AI. There's a massive gap in terms of support with this."**
>
> FSB member, Business consultancy, North West England

As identified earlier in the report, developing and adopting AI successfully can be very expensive. 37 per cent of small businesses say that large businesses have more resources to better utilise AI. At the same time, small businesses are, by their nature, flexible and it is more straightforward to change processes with less employees. It can therefore be very hard for large organisations to implement a change programme successfully. This is reflected in our research, with 23 per cent of self-employed people currently using AI within their business compared to 20 per cent average amongst SMEs.

If we want to see a wider and successful adoption of AI within a business, it is not necessary for all small business owners to develop advanced digital skills. However, some basic understanding of the technology and its potential is required.

> "The majority of people I speak to about AI, really don't know much about it. Building a basic understanding of AI is a crucial first step — if you don't have clue what it is, how are you going to use it?"
>
> FSB member, Architecture and Design, North West England

Additionally, if we want more businesses to incorporate AI, it is crucial to enable them to develop the skills they require too successfully do so. As outlined by the OECD:[36]

> "Decision makers and managers have to be trained in order to rethink their business processes and to reconfigure tasks and organisational structures accordingly. Managers need to nurture understanding of what AI systems can or cannot do, as well as what decisions can be automated by AI. They need to learn how to create sound models and manage algorithms, by setting clear objectives and stating soft goals in training and using AI."

> "I'm one of the least tech savvy people out there. But that doesn't really matter. My expertise is in processes, I outsourced all the coding as this isn't my area of expertise. It's important to understand what processes can use AI effectively, then develop a spec for the tech company to implement and be prepared to make continuous improvements to your processes...
>
> "From experience, knowing which processes you want to incorporate AI with and developing a detailed spec for those on the tech side is fundamental. We found it relatively straightforward to implement and we were quick to see a return on investment because of this."
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> FSB member, Logistics, West Midlands

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36 OECD, The Digital Transformation of SMEs, February 2021, https://www.oecd-ilibrary.org/sites/01a4ae9d-en/index.html?itemId=/content/component/01a4ae9d-en

Recommendations

The Department for Business and Trade should:

- **Develop a tech adoption and digital skills diagnostic tool.** This would provide small business owners with advice on what business processes they could potentially automate and advice/signposting to encourage them to do so. Within this tool, there could be an assessment of a company's current and future digital skills needs and what training would help them and/or their employees.

- **Introduce digital audit vouchers for small businesses to enable more small firms to think about how they are using data and technology, vouchers should be introduced to enable them to audit their tech needs and what technology they should consider adopting.** To help reduce the partiality of the firms conducting the audit, the auditing organisation would need to reimburse the voucher cost if the small company ends up buying its products. This scheme could be piloted before full roll out.

- **Develop an Automation Fund, providing small businesses with grant funding to automate processes where access to labour is challenging.** This could be targeted towards specific sectors in which we know they cannot fill certain roles due to labour shortages and automation could potentially solve this issue yet businesses do not have the funds to do so. Only five per cent of small businesses in manufacturing currently use robotics, yet there have been skills shortages in this sector for years. To ensure that small businesses are also training and developing their staff, as a pre-requisite to eligibility, firms should have a training plan in place.

- **Incorporate within the Help to Grow: Management course, a section on the successful use of AI within businesses. This should also be included within Help to Grow: Management Essentials, which FSB has been strongly supportive of and welcome its launch.** Despite fairly limited uptake, Help to Grow: Management has had some successful results in enabling business owners to grow.[37] The course curriculum currently has a module on digital transformation, which could include the use of AI.

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37 Policy Exchange, More Help to Grow, July 2023, https://policyexchange.org.uk/publication/more-help-to-grow/

- **Establish similar bodies to Made Smarter for different sectors across the country – these organisations should be focused on enabling small businesses to adopt innovation and technology, including AI.** Private sector experience and knowledge of business innovation should be essential criteria in its expansion. As is the case with Made Smarter, these would be focused on certain sectors and geographies.

The Department for Science, Innovation and Technology and Innovate UK should:

- **Build on the approach of BridgeAI for the long term, with less focus on further research and international collaboration and more focus on effective engagement with small businesses. This must include working with pre-existing government business support infrastructure.** Bridge AI was launched in April 2023, with the objective of stimulating AI adoption in high potential, lower-AI-maturity sectors. Of the £100 million budget of Bridge AI, £63million has been allocated on the commissioning of further research of what technologies could be adopted in these sectors.

Workforce skills

Specialised and advanced digital/AI skills will be increasingly important to certain sectors and should be an area that the UK continues to invest in. However, we should view digital skills more broadly. 46 per cent of all small businesses say that they are concerned that a lack the knowledge and/or skills or that their workforce lacks skills to utilise AI successfully. 20 per cent of small businesses are concerned that their workforce lacks sufficient skills to utilise AI.

As Tech UK has previously highlighted: *"it is important to remember that it is not only data scientists that are needed to drive AI projects."*[38] The OECD also outline that:[39]

> "Adapting to AI-enhanced working environment also calls for a retraining of the workforce, in order to provide workers with the skills for training AI algorithms and interpreting predictions. In some sectors or business functions, the skills gap could be substantial."

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38 Tech UK, AI Adoption in the UK: Putting AI into Action, March 2023, https://www.techuk.org/resource/ai-adoption-in-the-uk-putting-ai-into-action.html
39 OECD, The Digital Transformation of SMEs, February 2021, https://www.oecd-ilibrary.org/industry-and-services/the-digital-transformation-of-smes_bdb9256a-en

> "AI is an adjacent rather than a replacement. I've just recruited someone into a Quality Assurance role and the reason they got the job was their skills with AI and the productivity boost this entails. We need to future proof ourselves and this is the way the world is moving."
>
> FSB member, Health and social care, South East England

> "Young people new to the jobs market want to work in exciting and fast paced sectors that use the latest technology, future workers aspire to be involved with a cutting-edge company, if a potential employer does not offer this they can be viewed as out of touch, lack relevance and a potential hindrance on personal future career development and progress. Small businesses need to consider this when recruiting, increasingly finding the best talent in a very competitive market for talent acquisition will require investment in the latest technology."
>
> FSB member, Defence, West Midlands

According to Lloyds Bank, *2023 Consumer Digital Index*, around 7.5 million people in the UK lack the Essential Digital Skills needed for the workplace.[40] If we see large scale adoption of new technologies such as AI tools within employment, there is a risk that this gap will increase.

> "Like the majority of architectural designers, I've spent a lot of time of building up my skills on software like Photoshop but now they have AI powered updates, this expertise is much less valuable. However, I think there's a risk we go too far with this, AI can't design a house by itself, it can only get the basics right."
>
> FSB member, Architecture and Design, North West England

There is a clear need for small business owners as well as the people that they employ to reskill as well as upskill. However, there is a lack of in-work training in this area. While advanced, specialised digital skills are clearly important, we need to also consider the skills required from small business owners and the broader education landscape. This is important to both ensure successful use of AI from business owners and that everyone has the skills to build a successful career in the future.

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40 Lloyds Bank, 2023 Consumer Digital Index, November 2023, https://www.lloydsbank.com/banking-with-us/whats-happening/consumer-digital-index.html

Launched in the UK in 2021, Google's Career Certificates offers learners flexible online training to gain in-demand skills for careers in growing fields. Eight certificates are now available: Data Analytics, IT Support, Digital Marketing & E-commerce, Project Management, UX Design, Cybersecurity, Business Intelligence and Advance Data Analytics. These courses have been designed by Google experts and are recognised by employers across the UK. The courses are available on Coursera.org for a for a monthly fee and learners can complete the course at their own pace. Scholarships will be available through FSB, Department for Work and Pensions and other selected partners.

Google

As well as digital skills, policy makers need to give much consideration to the potential impact of AI on the labour market and what skills needs are likely to change in the future. There are many aspects of human intelligence and only some of these areas are able to be replicated by machines. AI is unlikely to truly substitute human creativity.[41] It is debatable whether AI can truly substitute human interpersonal skills. Therefore, it is logical to have an education and skills system with a stronger emphasis on these skill areas.

Recommendations

HM Treasury should:

- **Establish an independent body that looks at the current and future labour market and provides policy recommendations across Government departments. The independent body should develop short, medium and long-term labour market strategies and to consider the labour market implications of increasing AI use.** This would make the Future Skills Unit independent of the Department for Education and give it the remit to work in close partnership with the Migration Advisory Committee as well as the Low Pay Commission. Co-ordination between different departments in relation to immigration, employment, and education and skills policy is crucial in order to address current and future skills and labour shortages.

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41 For instance, see: World Economic Foundation, AI is a powerful tool, but it's not a replacement for human creativity, available at https://www.weforum.org/agenda/2023/06/ai-cannot-replace-human-creativity/

- **Increase the Corporation Tax relief for employers training low or medium-skilled employees. To encourage employers to train those with lower qualifications, the relief should remain at 100 per cent for those employees with a prior Level 6 qualifications, boosted to 160 per cent for those without a prior Level 6 qualification and boosted to 230 per cent for those without a prior Level 3 qualification.** Previous FSB research found that 48 per cent of small businesses say that tax relief incentives would encourage them to undertake more training.[42] Adult participation in learning is very unequal, with those who have high levels of existing qualifications much more likely to participate.[43] Therefore, incentives should be focused towards those without existing high level qualifications.

The Department for Education should:

- **Maintain Skills Bootcamps in the long term and develop two new ones - 'The basics of using AI for business' and 'Adopting technology within business processes.'** The first would be focused on employees who are not experts in AI but will increasingly be using AI within their job. The second would be targeted towards business owners/directors/managers of small businesses that want to incorporate AI into their business processes but do not have the knowledge, skills or understanding to do so. These courses should also focus on how businesses can incorporate AI in an ethical way.

- **Ensure that digital related qualifications are available to all students, who wish to study them, at GCSE and A Level. In addition to computer science, the government should introduce an applied computing GCSE, which is less theoretical than computer science and focused on the digital skills required in the workplace. Both of these courses should cover the basics related to AI.** Nearly all jobs in the future will require some aspects of digital skills but there has been a concerning decrease in the uptake of related GCSEs, especially since the phasing out of ICT GCSE. 14 per cent of pupils took computer science GCSE in 2023, only 21 per cent of these pupils were girls.[44]

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42 FSB, Scaling Up Skills: Developing education and training to help small businesses and the economy, August 2022, https://www.fsb.org.uk/resource-report/scaling-up-skills.html
43 Learning and Work Institute, Adult Participation in Learning Survey 2023, November 2023, https://learningandwork.org.uk/resources/research-and-reports/adult-participation-in-learning-survey-2023/
44 Joint Council for Qualifications, GCSE Results 2023, available at https://www.jcq.org.uk/examination-results/

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The Institute for Apprenticeships and Technical Education should:

- **Develop an apprenticeship standard at Level 2 that is reflective of the digital skills needs of a small business, including the basic use of AI.** There are currently no approved intermediate Apprenticeship Standards in information communication and technology. Small firms are unlikely to participate in the development of apprenticeship qualifications (known as standards). There were previously around 4,000 apprenticeship starts at Level 2 in Information and Communication Technology before frameworks were replaced by standards. Small firms are unlikely to have large IT departments and their job roles are likely to be less specialised than with larger firms meaning that a Level 2 apprenticeship standard would be beneficial for smaller firms.

METHODOLOGY

This report is based on FSB members views on Artificial Intelligence across the UK. FSB undertook a mixed method approach for the research, consisting of a quantitative online survey and semi-structured interviews were primarily conducted over the phone. The survey was nationwide in its reach and members were invited to participate in the survey via email and social media channels.

The survey was administered by the research agency Verve and was in the field from 14– 28 September 2023. The survey questionnaire was completed by a total of 816 small businesses. The survey findings are all weighted according to FSB membership weighting (to reflect the demographic balance of FSB members throughout the UK). All percentages derived from the survey are rounded to the nearest whole number, which is why some percentages presented in the figures do not sum to 100 per cent.

The semi-structured interviews were primarily conducted over the phone and included members from across the UK. These interviews were used to construct the detailed case studies that are included throughout the report. These case studies were specifically selected for the breadth of coverage.