

NBER WORKING PAPER SERIES

FIRM DATA ON AI

Ivan Yotzov
Jose Maria Barrero
Nicholas Bloom
Philip Bunn
Steven J. Davis
Kevin M. Foster
Aaron Jalca
Brent H. Meyer
Paul Mizen
Michael A. Navarrete
Pawel Smietanka
Gregory Thwaites
Ben Zhe Wang

Working Paper 34836
<http://www.nber.org/papers/w34836>

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
February 2026

The authors would like to thank the Economic and Social Research Council, Smith Richardson Foundation and Stanford Impact Labs for funding. Any views expressed are solely those of the individual authors and so cannot be taken to represent those of the Federal Reserve Bank of Atlanta, the Federal Reserve System, Bank of England or Bundesbank. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

At least one co-author has disclosed additional relationships of potential relevance for this research. Further information is available online at <http://www.nber.org/papers/w34836>

NBER working papers are circulated for discussion and comment purposes. They have not been peer-reviewed or been subject to the review by the NBER Board of Directors that accompanies official NBER publications.

© 2026 Bank of England, circulated with permission. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

Firm Data on AI

Ivan Yotzov, Jose Maria Barrero, Nicholas Bloom, Philip Bunn, Steven J. Davis, Kevin M. Foster, Aaron Jalca, Brent H. Meyer, Paul Mizen, Michael A. Navarrete, Pawel Smietanka, Gregory Thwaites, and Ben Zhe Wang
NBER Working Paper No. 34836
February 2026
JEL No. E0

ABSTRACT

We present the first representative international data on firm-level AI use. We survey almost 6000 CFOs, CEOs and executives from stratified firm samples across the US, UK, Germany and Australia. We find four key facts. First, around 70% of firms actively use AI, particularly younger, more productive firms. Second, while over two thirds of top executives regularly use AI, their average use is only 1.5 hours a week, with one quarter reporting no AI use. Third, firms report little impact of AI over the last 3 years, with over 80% of firms reporting no impact on either employment or productivity. Fourth, firms predict sizable impacts over the next 3 years, forecasting AI will boost productivity by 1.4%, increase output by 0.8% and cut employment by 0.7%. We also survey individual employees who predict a 0.5% increase in employment in the next 3 years as a result of AI. This contrast implies a sizable gap in expectations, with senior executives predicting reductions in employment from AI and employees predicting net job creation.

Ivan Yotzov
Bank of England
Ivan.Yotzov@bankofengland.co.uk

Jose Maria Barrero
Instituto Tecnológico Autónomo de
México (ITAM)
Business School
barsanjmb@gmail.com

Nicholas Bloom
Stanford University
Department of Economics
and NBER
nbloom@stanford.edu

Philip Bunn
Bank of England
Philip.Bunn@bankofengland.co.uk

Steven J. Davis
Stanford University
Hoover Institution
and NBER
stevend5@stanford.edu

Kevin M. Foster
Federal Reserve Bank of Atlanta
kevin.foster@atl.frb.org

Aaron Jalca
Federal Reserve Bank of Atlanta
aaron.jalca@atl.frb.org

Brent H. Meyer
Federal Reserve Bank of Atlanta
brent.meyer@atl.frb.org

Paul Mizen
King's College London
Department of Economics
Paul.Mizen@kcl.ac.uk

Michael A. Navarrete
Federal Reserve Bank of Atlanta
mnavarrete.econ@gmail.com

Pawel Smietanka
Deutsche Bundesbank
Research Centre
pawel.smietanka@bundesbank.de

Gregory Thwaites
University of Nottingham
Department of Economics
gregorythwaites@gmail.com

Ben Zhe Wang
Macquarie University
ben.wang@mq.edu.au

1. Introduction

How widespread is the adoption of artificial intelligence (AI) technologies across firms? What are the effects of AI on current employment and productivity, and how do businesses expect these effects to evolve in the coming years? Do these views differ when comparing the recent past and the immediate future, across countries or between employers and employees?

The recent surge in interest around the impacts of AI, with a 20-fold surge in media focus since 2020 alone (Figure 1), has produced a large quantity of data from a variety of sources, including surveys, Census data, job postings, etc. (e.g. Acemoglu et al. 2022a, 2022b, Bonney et al. 2024, McKinsey 2025). These data often face challenges related to sample size, representativeness, and the nature of the responses. In many cases, data on firm-level AI use do not come from senior executives who can provide accurate responses. As a result, there is no single high-quality, large sample representative international survey of AI use as reported by senior executives.¹

In response to this gap in firm-level AI data, four research teams from the Federal Reserve Bank of Atlanta, Bank of England, Deutsche Bundesbank, and Macquarie University in Australia fielded parallel sets of survey questions on AI use across representative surveys of senior executives between November 2025 and January 2026. The aim was to collect high-quality, representative data on AI use at the firm level, to understand its broader impact, and to guide research and policy. To ensure consistency, all four teams used the same questions and timed their survey waves to run in the same three months.

The US data came from the Survey of Business Uncertainty (SBU), an economy-wide business survey organized by the Federal Reserve Bank of Atlanta. The questions on AI adoption and impacts of AI on employment and productivity were asked in November 2025. The UK data came from the Decision Maker Panel (DMP), which is a monthly, economy-wide survey of UK businesses with ten or more employees run by the Bank of England. Questions on AI were first asked in the DMP over February-April 2025, and again between November 2025 and January 2026. In Germany, we use data from the Bundesbank Online Panel of Firms (BOP-F).

¹ For example, McKinsey (2025) estimate around 88% of businesses use AI in a paid internet survey. The challenge with paid internet executive surveys is it is unclear if respondents are really executives (e.g. Chandler and Paolacci, 2017), and whether they are providing informed responses. Bonney et al. (2024) estimate that AI use in 2024 was around 9% collected from the Census BTOS survey. This is a nationally representative unpaid US survey with respondents typically non-executives, so may not be informed on AI use. The fact these two surveys provide almost 10 fold differences in AI adoption highlights the importance of survey design.

The BOP-F is a representative survey of German firms, run by the Deutsche Bundesbank. The questions on AI were asked in the survey in January 2026. Finally, in Australia we use data from the Business Outlook Scenarios Survey (BOSS), organized by Macquarie University. The questions on AI were asked in the December 2025 wave of the BOSS. In all cases the surveys targeted senior executives, with the majority of respondents being the CEO, CFO, or in a senior management position.²

The surveys yield four key results.

First, adoption of AI technologies is widespread. On average, across the four countries 69% of businesses currently use some AI technology. The most commonly cited uses are ‘text generation using large language models’ followed by ‘visual content creation’ and ‘data processing using machine learning’. We also find substantial heterogeneity in the use of AI technologies. Larger, more productive, and higher-paying firms are more likely to be using AI technologies. At the same time, older firms and firms with older directors are less likely to be currently using AI. Adoption of AI technologies is also expected to increase. Over the next three years, 75% of businesses expect to be using some AI technology.

Second, over two-thirds of survey respondents (mostly CEOs, CFOs, and senior finance managers) themselves use AI technologies in the typical working week, with an average use of around 1.5 hours per week. Average weekly use has risen since early 2025 and is higher at better-paying firms and at firms with younger directors. CEOs are also more likely to use AI during the workweek than CFOs and other senior executives.

Third, the impact of AI on firm employment and productivity has been small so far. On average, more than 90% of business managers across the four countries estimate no impact of AI on their employment over the past three years. 89% report no impact of AI on their labor productivity (measured as volume of sales per employee) over the last three years. That said, a smaller minority of managers are already witnessing positive productivity impacts.

Fourth, in contrast to the limited impact so far, executives anticipate much larger impacts of AI on their business over the next three years. They expect AI to reduce employment by around 0.7% over the next three years. Given over 250 million people in employment over these four

² Figure 2, Panel A shows that around 70% of respondents to the SBU are either CEOs, CFOs, finance directors, or in other senior management positions. In the UK and Germany, over 90% of respondents hold one of these senior positions (Panel B), and in Australia, 87% of respondents hold these positions.

countries, firm executives therefore expect AI will lead to about 1.75 million fewer jobs by 2028 at existing firms.³ Executives of larger firms expect more negative impacts on employment, as do those in the accommodation and food and wholesale and retail sectors. At the same time, executives expect their firms to become more productive as a result of AI technologies. They expect AI will boost productivity by 1.4% over the next three years. Taken at face value, this could imply a reversal of the long-run decline in productivity growth in many advanced economies.⁴ Executives of larger and higher-paying firms expect larger positive impacts of AI on productivity, and so do those whose firms operate in the information and communications and administrative and support sectors. On net, their productivity and employment expectations imply a 0.8% boost to output over three years as a result of AI adoption.

Related Literature Our paper relates to four strands of the rapidly growing literature on AI technologies.

First, we build on papers which measure the adoption of AI technologies across businesses. The literature has pointed to a wide range of estimates, likely owing to differences in survey timing, question wording, sample composition, and the position of survey respondents within their business. Acemoglu et al. (2022) and McElheran et al. (2024) use the 2019 US Annual Business Survey and estimate that AI is used by around 3.2% of firms (12.6% of workers). Bonney et al. (2024) use the US Business Trends and Outlook Survey (BTOS) and estimate that around 5.4% of businesses (~9% employment-weighted) used AI as of February 2024.⁵ On the other hand, McKinsey (2025) estimates that 88% of organizations used AI in at least one business function in 2025. There are also varied estimates of AI adoption in the UK. Data from the 2023 Management and Expectations Survey finds that AI was used by 9% of firms that year (ONS 2025). A survey by the Institute of Directors (2025) estimates that around 49% of businesses used AI by 2025; however, a 2024 LSE-CBI survey finds that only 25% of firms had made specific investments in AI technologies (Oliveira-Cunha 2024). Our key contribution in this paper is threefold. First, we survey senior executives, typically CFOs and CEOs who are likely to have a good overview of their organization's AI adoption strategy. Second, we run

³ AI may also create new jobs in new firms, so the net employment impact could be less negative or even positive. Our results are only focused on employment in existing firms.

⁴ See the discussion in Bloom et al. (2020) and Goldin et al. (2024).

⁵ As of December 2025, adoption rates in the BTOS has increased to around 18% of businesses. This is expected to increase to 21% of businesses over the next six months in the latest data. See <https://www.census.gov/hfp/btos/data>

large surveys that are stratified based on the firm population and thus more representative than some other sources. Third, we use standardized questions across multiple countries between November 2025 and January 2026 to compare and contrast our results across four advanced economies. Finally, we either do not pay respondents, or in the case of Australian data we have various data checks to address the concerns of response falsification.⁶

We contribute to a second literature surveying the take-up of AI across individuals. For example, Bick et al. (2024), Hartley et al. (2025), Barrero et al. (2025), Sidoti and McClain (2025) and Bloom and Makridis (2026) all estimate individual AI use at around 50% of the population. Approximately half of this usage is work-related, and half is outside work.

Our paper also relates to studies that assess the realized and expected impact of AI technologies on businesses and the macroeconomy. A number of studies have found large productivity gains from AI in specific settings. Brynjolfsson et al. (2025a) find that generative AI boosts the productivity of customer-support agents in a large software firm, while del Rio-Chanona et al. (2025) suggest productivity gains of 15% to 30%. Likewise, Noy and Zhang (2023) use an RCT and find that access to ChatGPT boosts productivity in writing assignments.⁷ Babina et al. (2024a) link AI investment to product innovation and greater firm value, and Eisfeldt et al. (forthcoming) estimate a 5% boost in the value of firms whose workforces are more exposed to AI in the two weeks after ChatGPT was released. AI investment, however, seems to increase firms' exposure to systematic risk, as documented by Babina et al. (2024b). Despite these large gains in specific tasks and firm values, the economy-wide productivity gains from AI are less certain. For example, Acemoglu (2025) estimates a 0.66% ten-year TFP gain for the US from AI adoption, whereas Briggs and Kodnani (2023) estimate that generative AI can boost annual US labor productivity by 1.5pp over a ten-year period. For Europe, Misch et al. (2025) adopt the framework of Acemoglu (2025) and they estimate that AI would boost TFP in Europe by around 1.1% over five years.

Finally, we add further information to a literature studying the effects of AI adoption on the labor market. Survey evidence points to limited effects of AI adoption on overall employment so far (e.g. Abel et al. 2024, Cañas and Kerr 2024). However, effects are present in specific occupations or age-groups. Brynjolfsson et al. (2025b) use payroll data from the US and find

⁶ See, for example Chandler and Paolacci (2017) or Bell and Gift (2021)

⁷ Additional research finds productivity gains from AI in legal analysis (Choi and Schwarcz 2025); consulting work (Dell'Acqua et al. 2023); and programming (Peng et al. 2023 and Cui et al. 2025)

significant negative employment effects for early-career age groups in AI-exposed occupations (but without overall employment effects). Teutloff et al. (2025) find reductions in demand for freelance work following the launch of ChatGPT, particularly for substitutable tasks. Humlum and Vestergaard (2025) estimate very limited labor market impact in 2024 in detailed Danish data. Schubert (2025) finds that firms that adopted remote work more intensely in the early 2020s also adopt AI more intensely later in the decade.

The rest of the paper is structured as follows: Section 2 presents the main data sources used in the analysis. Section 3 validates our data showing a tight match between survey output and employment data and national aggregates. Section 4 presents the main results on AI adoption, weekly use by survey respondents, and impacts on employment and productivity. Section 5 provides similar results on estimated impacts by employees. Finally, Section 6 concludes.

2. Data

This section provides an overview of the four main data sources of firm-level data used in the analysis. The employee data that we use are covered in Section 5.

US firms: Survey of Business Uncertainty (SBU)

The Survey of Business Uncertainty (SBU) is a monthly online survey of CEOs, CFOs and senior executives at US firms run by the Federal Reserve Bank of Atlanta.⁸ The survey targets senior managers at a representative sample of firms covering all US regions, industries, and size categories. Respondents are initially recruited by telephone to confirm their position and company,⁹ and then moved into the survey panel. The sponsorship of the Atlanta Fed facilitates the recruitment of senior management. Figure 2, Panel A shows that 70% of respondents are CEOs, CFOs or other senior managers while Figure A1 shows the close match of SBU coverage to the population of all US firms, across industries (Panel A) and Census divisions (Panel B).

The SBU was established in 2014, and as of January 2026 receives responses from around 1,000 firms per month. Respondents are asked about current, past, and future outcomes for their business, including employment, sales revenue, and prices. The survey asks them to

⁸ <https://www.atlantafed.org/research/surveys/business-uncertainty>

⁹ A challenge with paid online surveys targeting subpopulations, like senior executives, is this can generate high shares of impostors (e.g. Chandler and Paolacci, 2017 find imposter shares can exceed 80%). The SBU is unpaid and executives are recruited by phone to confirm their identity.

provide subjective probability distributions for the evolution of those variables over the next year (see Altig et al. 2022 for further details).

In November 2025 the SBU included a set of questions on adoption of AI technologies, the impact of AI on employment and productivity, and average weekly use of AI by the survey respondent (see Figure B1 for screenshots of these questions).

UK firms: Decision Maker Panel (DMP)

The Decision Maker Panel (DMP) is a monthly, online survey of UK businesses.¹⁰ It is an economy-wide survey and matches the industry composition of the UK economy (Appendix Figure A2). The DMP was launched in 2016, and is run by the Bank of England. Since 2022, the DMP has averaged around 2,500 responses each month. Like the SBU, interviewees are unpaid and are initially recruited by telephone to confirm their position and company, and then moved into the survey panel.¹¹ The sponsorship of the Bank of England facilitates the recruitment of senior executives. Over 90% of respondents are either CFOs, CEOs, or in other senior management positions (Figure 2, Panel B).

Each month the DMP asks senior executives about the evolution of sales, prices, employment, wages, and capital expenditures at their firm over the past year and expectations for the year ahead. In addition to these standard questions, additional questions are regularly introduced into the survey on topical issues. For further information, see Bunn et al. (2024) who provide a detailed overview of the survey, including the structure, quality checks against other datasets, and information on how to access the data.

Over 2025-2026, firms in the DMP have been asked about the adoption of AI technologies and the impact of AI on their employment and volume of sales per employee (a proxy for productivity). In addition, survey respondents were asked how frequently they personally use AI technologies during the working week (survey questions in Figure B2).

We match DMP data with firm-level financials in the Bureau van Dijk (BvD) database, which contains basic accounts and directors data for UK companies.¹² BvD is based on the population

¹⁰ <https://decisionmakerpanel.co.uk/>

¹¹ A team at the University of Nottingham in the UK contacts businesses by phone to invite them to join the panel (Figure B6).

¹² Figure A3 shows a very strong relationship between survey data in the DMP on employment and sales to matched annual company accounts data from BvD, an initial indicator of survey response quality.

of UK firms in Companies House.

German firms: Bundesbank Online Panel – Firms (BOP-F)

The Bundesbank Online Panel – Firms is an online survey of a representative panel of firms located in Germany and is run by the Deutsche Bundesbank – Germany’s central bank. The survey was first conducted in June 2020 and since July 2021, it surveys around 8,000-9,000 CEOs and CFOs in German registered companies per quarter.

The sample for the BOP-F survey is drawn from the Business Register, with the sponsorship of the Bundesbank supporting the recruitment of senior executives. Firms from nearly all economic sectors with more than 12,500 EUR annual turnover or at least one employee who also provided information on their full address are eligible (see Boddin et al. 2024 for more information on how the sample is drawn).

While the survey has a quarterly frequency from the firm’s perspective, new responses are collected every month, with the questionnaire being in the field for about three weeks. This is because the survey follows the rotating panel principle, whereby one third of all new firms in the sample are randomly selected into group A, B, or C, with only one group being surveyed per month.

In January 2026, questions on adoption of AI technologies, impacts of AI on employment and productivity, and the average weekly use of AI by the survey respondent were asked in the BOP-F based on the SBU and DMP questions (see Figure B3), with responses from around 2,500 firms.

Australian firms: Business Outlook Scenarios Survey (BOSS)

The Business Outlook Scenarios Survey (BOSS) is a monthly, online survey of Australian businesses.¹³ The BOSS targets senior financial decision makers at a representative sample of firms over all Australian locations and industries, with 87% being either CFOs, CEOs, or in senior management positions, and was established in 2024 by Macquarie University.

Each month BOSS surveys more than 500 businesses on their one-year-ahead expectations of key macroeconomic variables such as inflation and interest rate, as well as the evolution of key

¹³ <https://www.mq.edu.au/macquarie-business-school/our-departments/departments-of-economics/our-research/business-outlook-scenarios-survey-boss>

business indicators such as growth rates of sales, prices of their own products and services, employment, wages and operating cost.

The questions on AI adoption, realized and expected impacts on productivity and employment, and personal use by the survey respondent (see Figure B4) were added to the BOSS survey and administered between 1 and 8 December 2025, with 602 firms participating in the survey.

3. Data Validation

To validate the quality of our firm survey panels before showing our AI data we run two exercises.

First, in Figure 3 we show how 10 years of data on output and employment from our firm panels compare against aggregate data for the US SBU and UK DMP surveys. Output data from the US survey tracks US GDP growth (top-left) and private employment (top-right), as do UK data when compared to UK GDP growth (bottom-left) and private sector employment (bottom-right). Hence, our surveys are accurate and representative of macro aggregates over the past decade. Their performance is similar across the pre-pandemic period, the COVID recession and recovery, and post-pandemic stabilization. Hence, we are confident that, due to our large representative sample of senior executives, our data reflect aggregate trends across the business cycle.

Second, we show the performance of the sales and employment forecasting questions included in our surveys on a quarterly basis. Once a quarter, executives are asked to forecast their year-ahead (12 months ahead) sales growth and employment growth. One year later we compare these forecasts to actual realizations of sales and employment growth for these firms. This enables a large sample evaluation of our survey respondents' forecast accuracy. As we see in Figure 4, our responding executives make accurate forecasts, with sales and employment predictions lining up tightly with realizations occurring over the next year. This positive relationship suggests that our panel is well-equipped to predict the future business conditions for their firms, increasing our confidence in the accuracy of their forecasts of the impact of AI.

4. Main Results

Having established the broad representative nature of our four national firm surveys, and their strong track record in matching aggregate output and employment data and forecasting future growth, we now turn to their responses and predictions regarding AI. We present the overall

results which combine firm-level results from each country into one figure, and also provide country-level values. Tables can also be downloaded from <https://bit.ly/3Zrvfs5>

4.1 Current and expected use of AI technologies

We begin by analyzing the current use of AI technologies by businesses. In all four surveys, firms are asked to select which of the following they are currently using, if any: data processing using machine learning; visual content creation; text generation using large language models; image processing using machine learning; robotics; autonomous vehicles; or other. Firms could select more than one technology.

Figure 5 presents the main results. The black bars in the figure correspond to the average across firms in all four surveys, weighted by the sample sizes of the respective surveys. Across all four countries, we find that a majority of businesses are currently using some AI technology. Adoption is highest in the US (78% of firms), followed by the UK (71%), Germany (65%), and Australia (59%). On average, 69% of all firms are currently using AI.

The figure also shows that adoption is not concentrated in a single use case. The most popular current use is ‘text generation using LLMs’ (by 41% of firms on average), but around 30% of firms also report using data processing using machine learning and visual content creation. Less commonly cited uses were image processing using machine learning (20%), robotics (9% of firms), and autonomous vehicles (3%), which are likely more specific to certain industries.

Adoption of AI technologies has increased since the start of 2025. Figure A4 compares the results on current AI adoption from the UK DMP between February-April 2025 and November 2025 to January 2026.¹⁴ We find that the use of all technologies has increased. On average, the percentage of businesses using at least one AI technology increased from 61% in February-April 2025 to 71% in November 2025-January 2026. This emphasizes the importance of having consistency in the timing of the questions across data sources during a time when adoption is increasing rapidly across businesses.

We next study the characteristics of firms which predict the current use of AI technologies. In Figure 6, we present a series of binned scatter plots of the relationships between current use of

¹⁴ These national AI surveys will be run twice yearly from 2026 onwards to track the evolution of AI. However, the only survey prior to the current wave was run by the UK.

AI (on the vertical axes) and a series of firm characteristics. This figure uses data from the DMP survey, due to the larger sample size and the availability of more firm covariates.¹⁵ We find that more productive (Panel A), larger (Panel B), and higher-paying firms (Panel C) are more likely to be using AI.¹⁶ In contrast, in Panels D and E, we show that firms with older directors on average, and older firms are *less* likely to be currently using AI. Use of AI technologies also varies by sector. In Figure A6 Panel A, we show that current AI adoption by UK firms is highest in the finance and insurance and professional and scientific sectors.

In Table 1, we test the robustness of these relationships in a regression table where we combine all the variables in a single specification and also control for industry and time fixed effects. The dependent variable across all columns is a dummy for whether a firm uses any AI technology, scaled by 100 for interpretability. In addition to all the univariate relationships (Columns 1-11), in Columns 12 and 13 we find that the most robust predictors of AI use from Figure 6 are labor productivity, firm employment, average wage per employee, and the average age of directors.¹⁷ We also find that firms with higher average productivity growth in 2025 are more likely to be using some AI technology.¹⁸

Finally, we consider how firms expect adoption of AI technologies to change over the next three years. Figure A7 shows that AI adoption is expected to increase on average. Across all four countries, 75% of firms expect to be using some AI technology over the next three years. Furthermore, we find that the most common technology firms expect to use is data processing using machine learning, suggesting firms are expecting to build capacity to use AI tools for data processing, even if they are not currently used as extensively.¹⁹

Overall, this section highlights that AI use is widespread across businesses in the US, UK, Germany, and Australia. Larger and more productive firms are more likely to be using AI

¹⁵ In Figure A5, we show similar results for a subset of variables from the US SBU. More productive (Panel A) and larger (Panel B) firms are more likely to be using an AI technology in US firms as well.

¹⁶ Labor productivity is constructed using firm-level accounts data from BvD as the real gross value-added per employee. The data from the latest accounts available for each firm are used in the figure. The average wage per employee (Panel C) is constructed as the total wage bill per employee, again using accounts data.

¹⁷ We do not include a regression of productivity growth, real sales growth, and employment growth in the same specification because productivity growth is defined in our analysis as real sales growth – employment growth. Running these three variables in the same specification would result in collinearity. Therefore, we split the results into Columns 12 and 13.

¹⁸ As further robustness, in Table A1 we use as a dependent variable the number of AI technologies currently used instead of a dummy for whether any AI technology is used. The results are consistent across the two specifications.

¹⁹ AI adoption is also expected to increase across almost all industries over the next 3 years (Figure A6, Panel B)

technologies, as are higher-paying businesses. AI adoption has increased since the start of 2025 and is expected to increase over the coming years. One limitation of this analysis is that it only refers to the extensive margin of adoption, but not about how intensively firms are using these technologies or the impact on their businesses. In Sections 4.3 and 4.4, we present new evidence on how firms estimate that AI has been impacting their employment and productivity, and how they expect these effects to change in the next three years.

4.2 Use of AI by survey respondents

In this section, we analyze how frequently the respondents themselves use AI during a typical work week. As these respondents typically hold senior positions in their firms (e.g. CEOs, CFOs, senior finance managers), these results are another useful proxy for AI adoption more broadly since they are in a position to instruct their subordinates to make use of AI as they see the opportunity. They are also less likely to be subject to measurement error, as the respondents are reporting about their personal use, rather than for the business as a whole. The survey asks whether they personally use AI technologies: “Not at all”; “Up to 1 hour a week”; “1 to 5 hours a week”; or “More than 5 hours a week”.

Figure 7 Panel A presents the distribution of responses across these categories for US, UK, German and Australian respondents. Across all firms, only 28% of respondents do not use AI at all during the working week. The modal response is up to 1 hour a week (41%), but more intensive AI use is not uncommon. 24% of respondents report 1-5 hours of AI use per week, and 7% report using AI more than five hours in a typical working week. In Panel B, we assign quantitative values to each of the categories to estimate the average number of hours of AI use. Across all firms, our respondents use AI around 1.5 hours per week on average. These results are similar across all four countries, ranging from 1.7 hours in the US to 1.4 hours in the UK and Germany, and 1.5 hours in Australia.

We next consider how AI use varies with firm-level and respondent characteristics. Figure A8.a presents binned scatterplots with the average weekly AI use on the vertical axis for UK firms. We find that respondents in younger firms use AI technologies more often during the working week (Panel A), as do respondents in firms where the average age of directors is lower (Panel B). These relationships are similar to Figure 6, Panels D and E, where the firm age and average age of directors are shown to be negatively correlated with current AI adoption across the

business.²⁰ Figure A8.b shows that a similar negative relationship is present between firm age and average weekly AI use in US firms as well. In Figure A9 we split the frequency of AI use by the position of the respondent in the business. Specifically, we distinguish between CEOs, CFOs, and other senior executives. In both the US (Panel A) and UK (Panel B), we find that AI is more frequently used by CEOs than other respondents. Finally, in Figure A10 we analyze how the frequency of AI use has changed since the start of 2025. This figure is based on responses to the DMP survey. We find that AI use has increased sharply since the start of 2025. The percentage of respondents who did not use AI at all dropped from 45% to 25%, and the frequency in each of the other categories increased. On average, AI use by senior executives increased by around 50%, from 0.9 hours a week to 1.4 hours a week in less than a year.

4.3 Impact of AI on firm employment

In this section we present results on the impact of AI technologies on firm realized and expected employment. Firms are asked to estimate these impacts using five categories, ranging from a large positive impact (increasing employment by more than 5%) to a large negative impact (decreasing employment by more than 5%). Figure 8 presents the main results over the past three years. In Panel A, we show the distribution of responses across the five categories. Across the four surveys, more than 90% of firms on average estimate no impact over the last three years. This percentage is highest in Germany (95% of firms), followed by the US (89% of firms), UK (89%), and Australia (81%). Among the remaining firms which report some impact, the results are skewed slightly to the negative side in the UK and US, and slightly to the positive in Germany and Australia.

To estimate an average quantitative impact of AI on employment, we assign numerical values to each of the five categories in Panel A. We assign values $\pm 7.5\%$ to large positive/negative impacts; $\pm 2.5\%$ to small positive/negative impacts; and 0% to no impact. In Figure 8, Panel B we present these average impacts. Across all firms, the impact of AI is essentially zero over the past three years. However, there is some heterogeneity across the four countries. In the UK, firms estimate that AI has lowered employment by around 0.14% over the last 3 years. In the US, there is also a small negative average impact at -0.09%. In contrast, in Germany firms estimate that AI has increased employment by 0.07%, and in Australia firms estimate a positive

²⁰ In Table A2 we analyze the determinants of weekly AI use with univariate and multivariate regressions, following the structure presented in the remaining regression tables of the paper. In the most demanding specifications with sector and time fixed effects (Columns 12-13), we find that the average age of directors remains the most significant predictor of average weekly AI use.

AI employment impact of around 0.32% over the past 3 years.

There is substantial sectoral heterogeneity in the realized employment impacts of AI. Figure A11, Panel A shows the average realized employment impacts from AI across industries in the UK. The impacts vary from positive in the Construction sector (+0.1%) to negative in the Accommodation and Food (-0.4%) and Transport and Storage (-0.4%).

In Figure 9, we present results on how firms expect AI to impact their employment over the next three years. The distribution of responses in Panel A looks markedly different from the realized employment impacts in Figure 8. In Figure 9 Panel A, 63% of all firms expect no impact over the next three years, with the distribution of responses being skewed much more to the negative side. 18% of all firms expect a small negative impact, lowering employment by less than 5%, and 8% expect a large negative impact on employment, greater than 5%. These results are similar across the US and UK. German firms record an expectation of a smaller change (positive or negative) compared to US and UK firms, which may reflect characteristics of the German labor market, but with a higher negative impact expected than a positive impact. In contrast, Australian firms remain more evenly balanced on the expected employment impacts of AI – 16% expect a negative impact and 16% expect a positive impact overall. Panel B of Figure 9 presents the corresponding quantitative estimate on the expected employment impacts of AI. Over the next three years, firms across the four countries expect AI to lower employment by around 0.7%. The largest effects are in the UK (-1.4%), followed by the US (-1.2%). German and Australian firms do not expect AI to have as large an effect on overall employment over the next three years, possibly due to more regulated labor markets.

To gauge how lower employment may be achieved, a sub-sample of UK firms were asked a follow up question about the expected importance of hiring fewer new employees versus increased exits of existing employees.²¹ Around two-thirds of the reduction in employment is expected to come from firms hiring fewer new employees.

There remains heterogeneity across sectors in the expected employment impacts, as we show in Figure A11, Panel B. The expected impacts over the next three years are negative across all sectors of the economy for firms in the UK. The largest negative impacts are in the

²¹ This question was included for half of the firms in the DMP survey in January 2026 (one-sixth of the total UK sample), and was only asked to firms who expected AI to lower their employment over the next three years.

Accommodation and Food (-1.8%) and Wholesale and Retail (-2%) sectors.²²

Beyond the sectoral differences, we also consider how the expected employment impacts vary with various firm-level characteristics. Table 2 presents the determinants of expected AI employment impacts using univariate and multivariate regressions for UK firms. We use the same set of variables here as those in Table 1 where we analyzed the determinants of current AI adoption. To maximize the sample size, the regressions use the latest firm observation on the expected employment impact using data collected over February-April 2025 and November 2025-January 2026. Focusing on Columns 12-13 which include all the variables as well as industry and time fixed effects, we find that larger firms expect more negative impacts of AI on employment. In contrast, higher realized employment growth in 2025 and higher expected employment growth in 2025 are both associated with *less* negative AI employment impacts.

4.4 Impact of AI on firm productivity

In this section we present results on the impact of AI technologies on firms' realized and expected productivity. The survey questions follow the same structure as the employment impacts. Productivity in this analysis is defined as the volume of sales per employee. Figure 10 presents the main results on realized productivity impacts over the past three years. In Panel A, we show the distribution of responses across the five categories. Across the four surveys, 89% of firms on average estimate no impact over the last three years. This percentage is highest in the US and Germany (91% of firms), followed by the UK (89%), and Australia (79%). Among the remaining firms which report some impact, the results are skewed to the positive across all four countries, indicating some positive impacts in the aggregate.

To estimate an average quantitative impact of AI on productivity, we assign numerical values to each of the five categories in Panel A. As with the employment impact, we assign values $\pm 7.5\%$ to large positive/negative impacts; $\pm 2.5\%$ to small positive/negative impacts; and 0% to no impact. In Figure 10, Panel B we present these average impacts. Across all firms, AI is reported to have boosted productivity by around 0.29% over the past three years. The effects are very similar across the US, UK, and Germany, ranging from 0.24% to 0.29%. In contrast, in Australia firms estimate a larger positive AI productivity impact so far, at around 0.49%

²² The expected impacts of AI on employment have also become more negative since the questions were asked in the beginning of 2025 in the DMP survey. Over February-April, the expected impact on employment was -0.8% over the next three years, compared to the -1.4% expected impact for the same questions over November 2025-January 2026.

over the past 3 years. Figure A12, Panel A shows a breakdown of the realized AI productivity impacts by industry. These are positive across all industries in the UK. Firms in the Information and Communications and Professional and Scientific sectors report the largest positive productivity impacts from AI so far, at +0.8% and +0.5%, respectively.

In Figure 11, we present results on how firms expect AI to impact their productivity over the next three years. The distribution of responses in Panel A looks markedly different from the realized productivity impacts in Figure 10. 60% of all firms expect no impact over the next three years, with the distribution of responses being clearly skewed to the positive. 25% of all firms expect a small positive impact, increasing productivity by less than 5%, and 12% expect a large positive impact on productivity, greater than 5%. These results are similar across UK, US, German and Australian firms. Panel B of Figure 11 presents the corresponding quantitative estimates on the expected productivity impacts of AI. Over the next three years, firms across the four countries expect AI to increase productivity by an average of around 1.4%. The largest effects are in the US (+2.3%), followed by the UK (+1.9%), Australia (+0.9%), and Germany (+0.9%).

The productivity boost from AI is not expected to be equally distributed across sectors of the economy, as we show in Figure A12, Panel B. The largest impacts are in the information and communications and administrative and support sectors, which expect AI to increase productivity by 2.8% and 2.5% over the next three years, respectively.²³ Much smaller impacts are expected by firms in Accommodation and Food, Construction, and Recreational Services.

As with the expected employment impacts, we also consider how the expected productivity impacts vary with various firm-level characteristics. Table 3 presents the determinants of expected AI productivity impacts using univariate and multivariate regressions for UK firms. We use the same set of variables here as those in Tables 1 and 2 for comparability. As was the case for employment, the regressions use the latest firm observation on the expected productivity impact using data collected over February-April 2025 and November 2025-January 2026, which is again 2,793 unique firm observations. Focusing on Columns 12-13 which include all the variables as well as industry and time fixed effects, we find that larger firms, higher-paying firms, and those with higher expected employment growth have more

²³ Between February-April 2025 and November 2025-January 2026, the expected productivity impacts of AI over the next three years increased from +1.5% to +1.9%

positive expected impacts of AI on productivity.

Overall, the last two sections show that the adoption of AI technologies has had little impact on firm employment and only a small positive impact on firm productivity so far. However, firms anticipate large impacts over the next few years. On average, businesses expect AI to boost productivity by around 1.4% over the next three years, while lowering employment by around 0.7% over the same period. This also implies an increase in output of around 0.8%.

5. Estimated AI impacts by employees

So far, the evidence presented in Section 4 has focused on executives responding on behalf of their businesses. Are the perceived and expected impacts of AI similar across business executives and employees? To answer this, we asked the identical questions to employees using the Survey of Working Arrangements and Attitudes (SWAA).²⁴ The SWAA is a monthly survey of between 2,500 and 10,000 US residents aged between 20 and 64. Specifically, we asked about the impact of AI on employment and productivity in their current firms over the last three years and looking ahead in the next three years. We also asked employees how frequently they used generative AI in their jobs. These questions were added in the December 2025 SWAA wave. Figure B5 shows screenshots of the questions in the SWAA. Around 3,000 people answered.

We present the main results in Figure 12. In Panel A, we see employees report using AI for about the same amount of time as executives do, averaging around 1.8 hours a week.²⁵ In Panel B we see employees are more optimistic over the last 3 years on the impact of AI on productivity and employment, suggesting this has had a moderately positive impact on both. Strikingly, in Panel C we see employees are far more optimistic than executives on the impact of AI on future employment, while *less* optimistic about the positive productivity impacts. In particular, employees predict that AI will *increase* employment by approximately 0.5% in their firms over the next three years compared to the prediction from executives that it will *reduce* employment by 0.7% in all firms and 1.2% in US firms. Hence, there appears to be a large gap in the perceptions on the impact of AI, from a view by employees that AI will create jobs versus a view from executives that it will reduce jobs. Likewise, employees expect AI to increase

²⁴ <https://wfhresearch.com/data/>

²⁵ The identical question on average AI use was asked in a survey of approximately 2,000 UK employees in December 2025. On average, UK employees reported using AI for about two hours per week, similar to US employees.

productivity by around 0.9% over the next three years, compared to an expected increase of 1.4% across all firms and 2.3% by US firm executives in particular.

6. Conclusion

In this paper, we present new evidence on how firms are using AI technologies, as well as their realized and expected impacts on employment and productivity. We use survey evidence from four large, economy-wide business surveys – the US Survey of Business Uncertainty, the UK Decision Maker Panel, the German Bundesbank Online Panel - Firms, and the Australian Business Outlook Scenarios Survey – using identical questions asked between November 2025 and January 2026. We outline four key findings. First, AI technologies are currently used by around 70% of businesses, and adoption is expected to increase. Larger, more productive, and higher-paying firms are more likely to be using some AI technology. Second, we show that AI technologies are being actively used by senior survey respondents (typically CEOs, CFOs, and senior finance managers). On average, respondents use AI for around 1.5 hours in a typical working week, and this frequency has increased sharply since the start of 2025. Third, firms estimate that AI has had little impact on their employment so far, and only a modest boost to productivity over the past three years. Finally, firms expect AI to have larger impacts over the medium-term. Over the next three years, firms predict that the adoption of AI will boost productivity by around 1.4%, on average, while reducing employment by around 0.7%. This is in sharp contrast to expectations of employees, who expected higher job creation as a result of AI, along with smaller productivity gains over the next three years. Overall, our approach can be used to monitor the adoption and impacts of AI over time and across multiple countries. We furthermore emphasize the importance of consistency in survey design and timing for obtaining comparable, high-quality results across countries.

References

- Abel, J R, R Deitz, N Emanuel and B Hyman (2024), “[AI and the labor market: Will firms hire, fire, or retrain?](#)”, Liberty Street Economics, 4 September.
- Acemoglu, D, D Autor, J Hazell and P Restrepo (2022a), “Artificial Intelligence and Jobs: Evidence from Online Vacancies”, *Journal of Labor Economics* 40(S1).
- Acemoglu, D, G W Anderson, D N Beede, C Buffington, E E Childress, E Dinlersoz, L S Foster, N Goldschlag, J C Haltiwanger, Z Kroff, P Restrepo and N Zolas (2022b), “Automation and the workforce: A Firm-level view from the 2019 Annual Business Survey”, NBER Working Paper 30659.
- Acemoglu, D (2025), “The simple macroeconomics of AI”, *Economic Policy* 40(121): 13-58.
- Altig, D, J M Barrero, N Bloom, S J Davis, B H Meyer, and N Parker (2022), “Surveying Business Uncertainty”, *Journal of Econometrics* 231(1): 282-303.
- Baker, S, N Bloom and S Davis (2016), “Measuring economic policy uncertainty”, *The Quarterly Journal of Economics* 131: 1593–1636.
- Babina, T, A Fedyk, A He and J Hodson (2024a), “Artificial intelligence, firm growth, and product innovation”, *Journal of Financial Economics* 151: 103745.
- Babina, T, A Fedyk, A He and J Hodson (2024b), “Artificial Intelligence and Firms' Systematic Risk”, Working Paper.
- Barrero, J, N Bloom and S Davis (2025), “Why working from home will stick”, Stanford working paper.
- Bell, Andrew M. and Gift, Thomas, (2023), “Fraud in Online Surveys: Evidence from a Nonprobability, Subpopulation Sample” *Journal of Experimental Political Science*, Vol. 10(1), Spring 2023, 148-153,
- Bick, A, A Blanden and D Demming (2024), “The Rapid Adoption of Generative AI”, NBER Working Paper 32966.
- Bloom, N, C I Jones, J Van Reenen and M Webb (2020), “Are Ideas Getting Harder to Find?”, *American Economic Review* 110(4): 1104–44.
- Bloom, N. and Makridis, C (2026), “The politics of AI”, NBER WP 34813.
- Boddin, D, M Köhler and P Smietanka (2024), “Bundesbank Online Panel - Firms Data Report 2023-07”, DOI: [10.12757/BBk.BOPF.2022Q2.01](https://doi.org/10.12757/BBk.BOPF.2022Q2.01).
- Bonney, K, C Breaux, C Buffington, E Dinlersoz, L S Foster, N Goldschlag, J C Haltiwanger, Z Kroff and K Savage (2024), “Tracking firm use of AI in real-time: A snapshot from the Business Trend and Outlook Survey”, NBER Working Paper 32319.
- Briggs, J and D Kodnani (2023), “[The Potentially Large Effects of Artificial Intelligence on Economic Growth](#)”, Goldman Sachs Global Economics Analyst, 26 March.
- Brynjolfsson, E, D Li and L Raymond (2025a), “[Generative AI at Work](#)”, *The Quarterly Journal of Economics* 140(2): 889-942.

Brynjolfsson, E, B Chandar and R Chen (2025b), “Canaries in the Coal Mine? Six Facts about the Recent Employment Effects of Artificial Intelligence”, Working Paper.

Bunn, P, N Bloom, A Crundwell, S Khan, C Menzies, P Mizen, M Sculthorpe, K Shah, G Thwaites and I Yotzov (2024), “The Decision Maker Panel: A User’s Guide”, Bank of England Staff Working Paper 1096.

Cañas, J and E Kerr (2024), “[Texas firms using AI report little impact on employment](#)”, Federal Reserve Bank of Dallas, 25 June.

Chandler, J and G Paolacci (2017), "Lie for a Dime: When Most Prescreening Responses Are Honest but Most Study Participants Are Impostors", *Social Psychological Personality Science* 8(5): 500-508.

Choi, J H and D Schwarcz (2025), “AI Assistance in Legal Analysis: An Empirical Study”, *Journal of Legal Education* 73(2): 384-420.

Cui, Z (Kevin), M Demirer, S Jaffe, L Musolff, S Peng and T Salz (2025), “The Effects of Generative AI on High-Skilled Work: Evidence from Three Field Experiments with Software Developers”, SSRN Scholarly Paper No. 4945566.

Dell’Acqua, F, E McFowland III, E Mollick, H Lifshitz-Assaf, K Kellogg, S Rajendran, L Kraymer, F Candelon and K R Lakhani (2023), “Navigating the Jagged Technological Frontier: Field Experimental Evidence of the Effects of AI on Knowledge Worker Productivity and Quality”, Harvard Business School Working Paper.

del Rio-Chanona, R. Maria, Ekkehard Ernst, Rossana Merola, Daniel Samaan, and Ole Teutloff. 2025. “AI and Jobs: A Review of Theory, Estimates, and Evidence.” arXiv preprint arXiv:2509.15265v1

Eisfeldt, A L, G Schubert, B Taska and M Ben Zhang (Forthcoming), “Generative AI and Firm Values”, *Journal of Finance*.

Goldin, I, P Koutroumpis, F Lafond and J Winkler (2024), “Why Is Productivity Slowing Down?”, *Journal of Economic Literature* 62(1): 196–268.

Hartley, J, F Jolevski, V Melo and B Moore (2025), “The Labor Market Effects of Generative Artificial Intelligence”, SSRN Working Paper

Humlum, A and E Vestergaard (2025), “Large Language Models, Small Labor Market Effects”, University of Chicago working paper.

Institute of Directors (2025), “[Major blockers to AI adoption in British business](#)”, 28 April.

McElheran, K, J F Li, E Brynjolfsson, Z Kroff, E Dinlersoz, L S Foster and N Zolas (2024), “AI Adoption in America: Who, What, and Where”, *Journal of Economics & Management Strategy* 33(2): 375–415.

McKinsey (2025), “[The state of AI in 2025: Agents, innovation, and transformation](#)”, November.

Misch, F, B Park, C Pizinelli and G Sher (2025), “[AI and Productivity in Europe](#)”, IMF Working Paper 2025/067.

Noy, S and W Zhang (2023), “[Experimental evidence on the productivity effects of generative artificial intelligence](#)”, *Science* 381(6654).

ONS (2025), “[Management practices and the adoption of technology and artificial intelligence in UK firms: 2023](#)”, 24 March.

Oliveira-Cunha, J, B Serra-Lorenzo, A Valero (2024), “[What an LSE-CBI survey found about AI adoption in UK firms](#)”, 2 July.

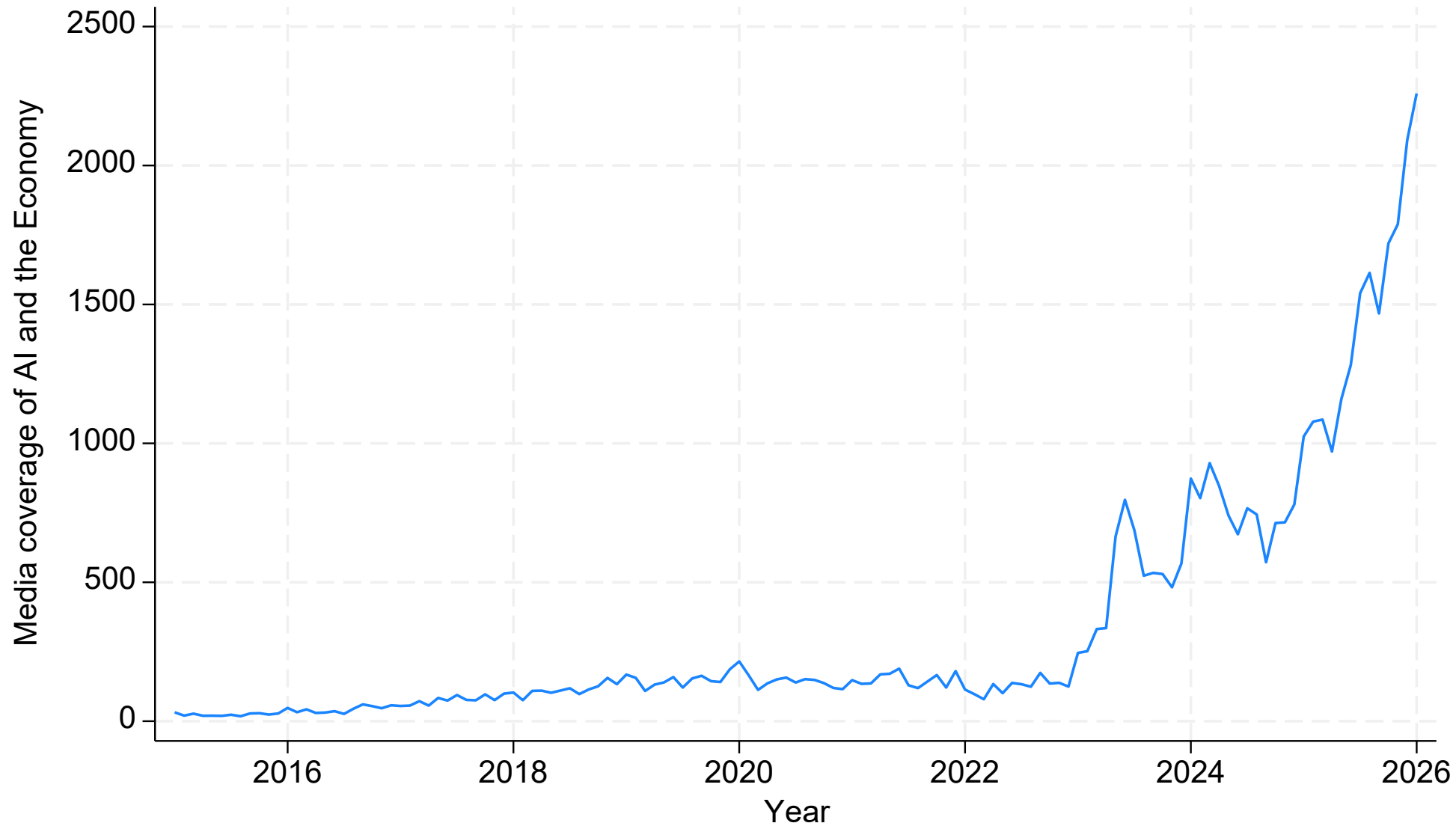
Peng, S, E Kalliamvakou, P Cihon and M Demirer (2023), “The Impact of AI on Developer Productivity: Evidence from GitHub Copilot”, Working Paper.

Schubert, G (2025), “Organizational Technology Ladders: Remote Work and Generative AI Adoption,” Working Paper.

Sidoti, O and C McClain (2025), “34% of U.S. adults have used ChatGPT, about double the share in 2023”, PEW Research Center Short Read.

Teutloff, O, J Einsiedler, O Kassi, F Braesemann, P Mishkin and R Maria del Rio-Chanona (2025), “[Winners and losers of generative AI: Early Evidence of Shifts in Freelancer Demand](#)”, *Journal of Economic Behavior & Organization* 235, 106845.

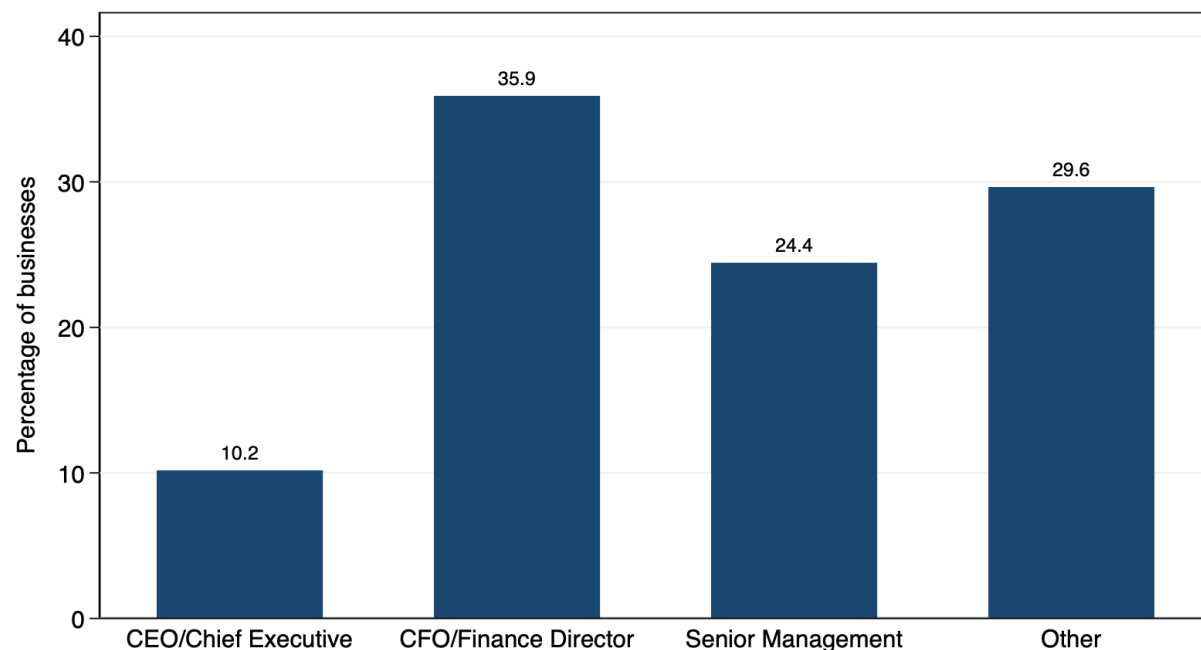
Figure 1 Media coverage of AI and the Economy since 2015



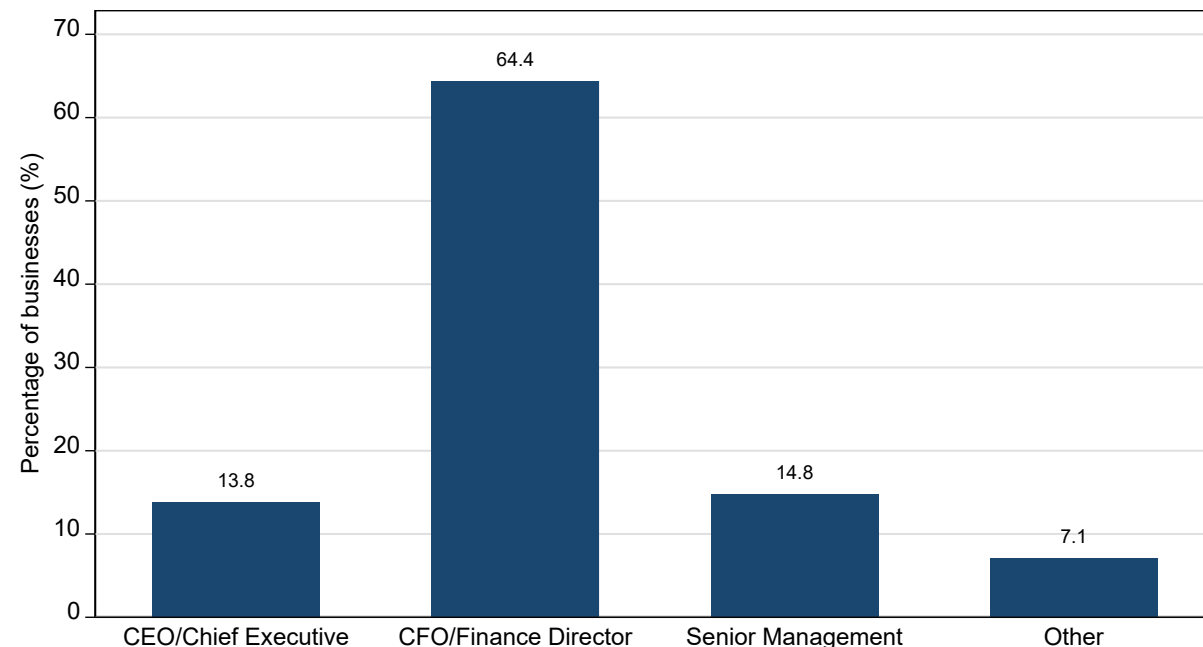
Source: AI Economic Uncertainty Index, measuring the coverage of AI in around 2000 daily newspapers in the US. Normalized to 100 on 2015 to 2021 inclusive. Coverage defined as articles that included (AI, artificial intelligence, genAI, machine learning, computer vision) AND (economic, economy). Based on the methodology of Baker, Bloom and Davis (2016) and provided on www.policyuncertainty.com

Figure 2 Position of respondents within their firm

Panel A US Firms (SBU)



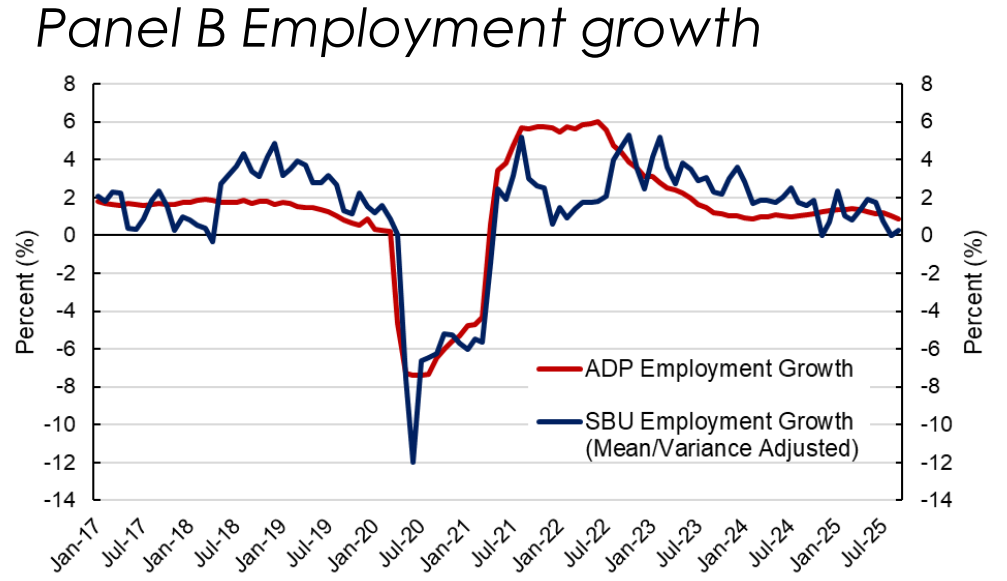
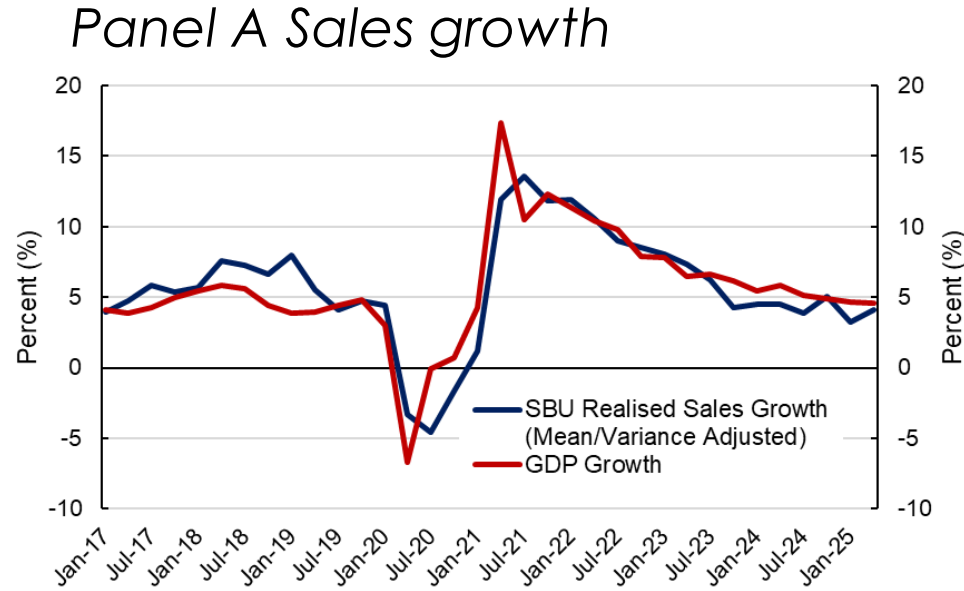
Panel B UK Firms (DMP)



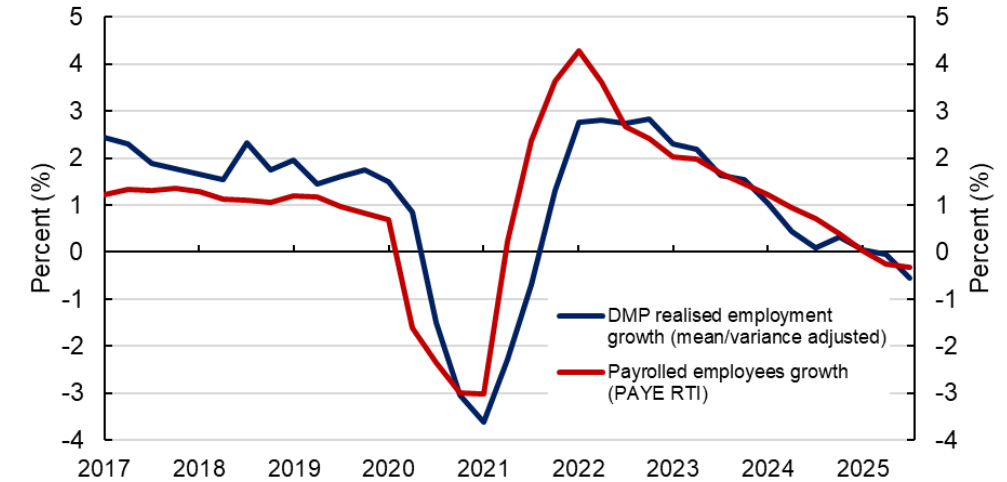
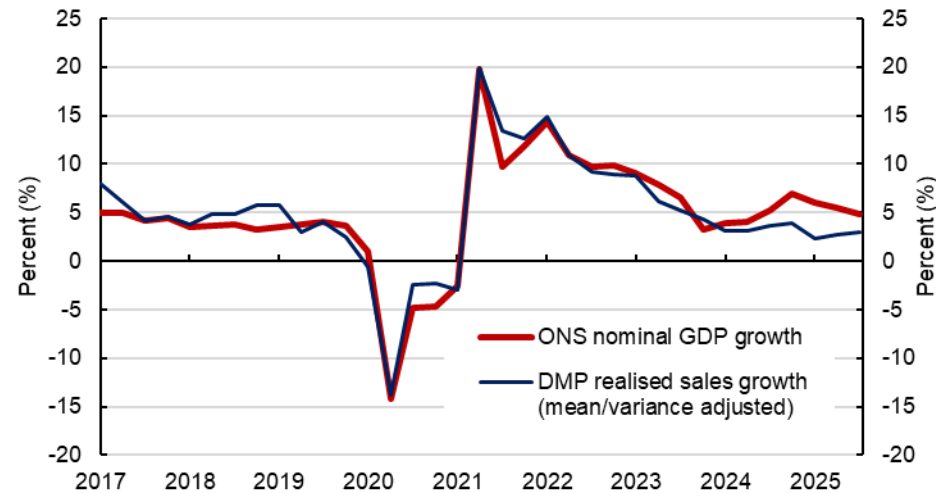
Notes: This figure shows the position of survey respondents. Panel A shows data from the US Survey of Business Uncertainty (SBU), averaged over January 2017 to January 2025. Panel B shows data from the UK Decision Maker Panel (DMP), averaged over 2017-2025.

Figure 3 Firm sales and employment growth vs aggregate statistics

US Firms
(SBU)



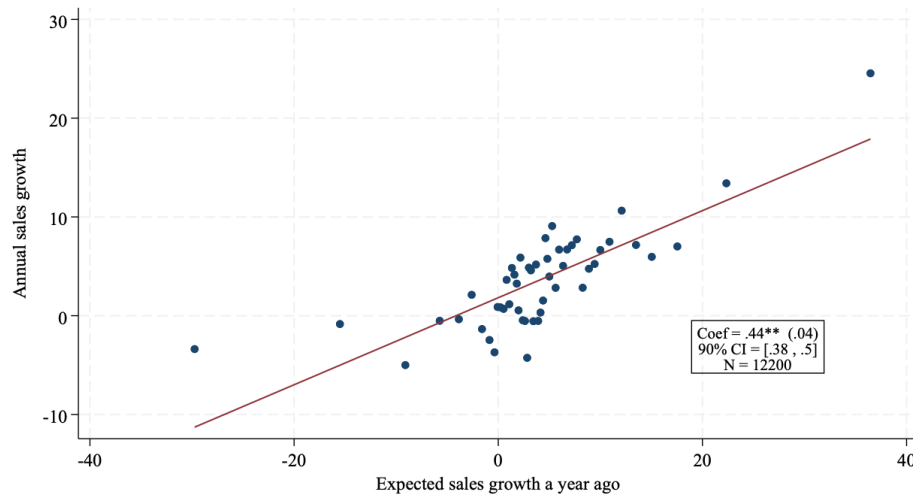
UK Firms
(DMP)



Sources: SBU; ADP; BEA; DMP; ONS; HMRS and authors' calculations. **Notes:** SBU sales data are compared to GDP growth from the BEA. SBU employment growth data are compared to ADP employment growth. DMP sales data are compared to whole economy nominal GDP growth at current market prices. DMP employment (for the private sector) is compared to ONS/HMRC data on the number of payrolled employees. DMP and SBU data are adjusted to match the mean and variance of growth in the corresponding ONS, HMRC, GDP, and ADP series over the time period shown on each chart.

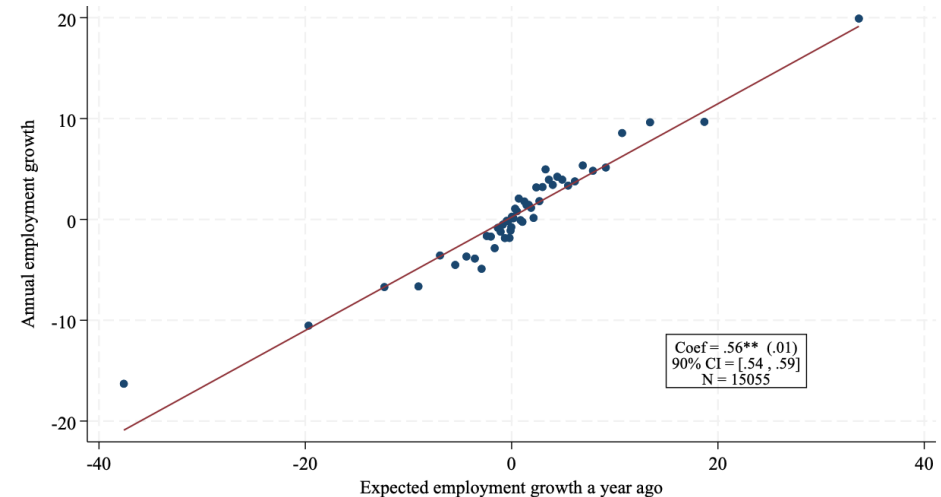
Figure 4 Sales and Employment Forecasts vs Realizations

Panel A Sales growth

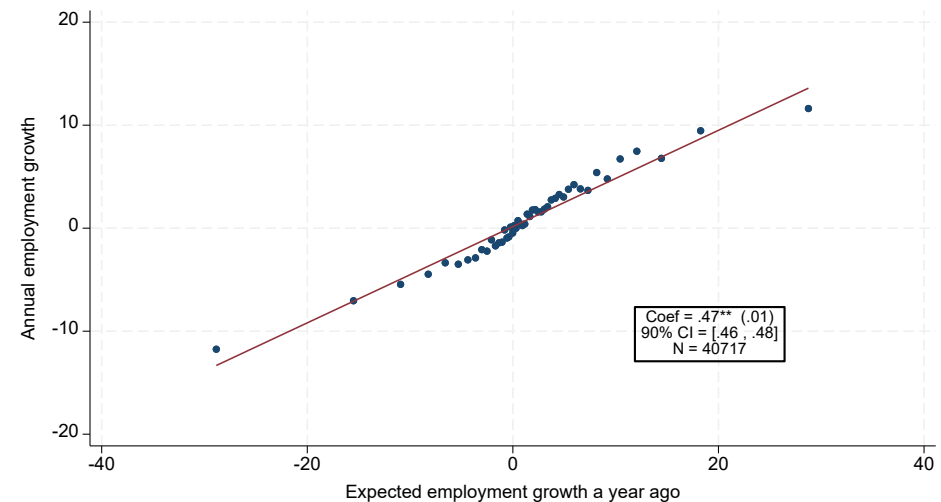
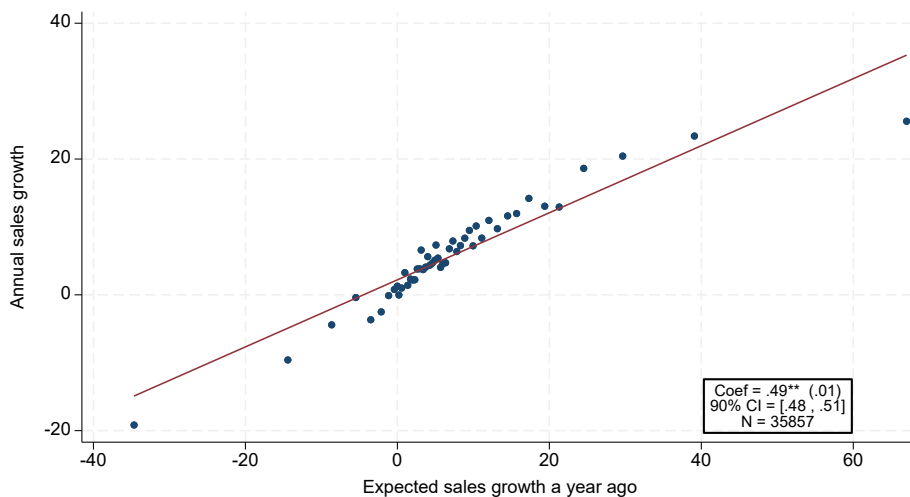


US Firms
(SBU)

Panel B Employment growth

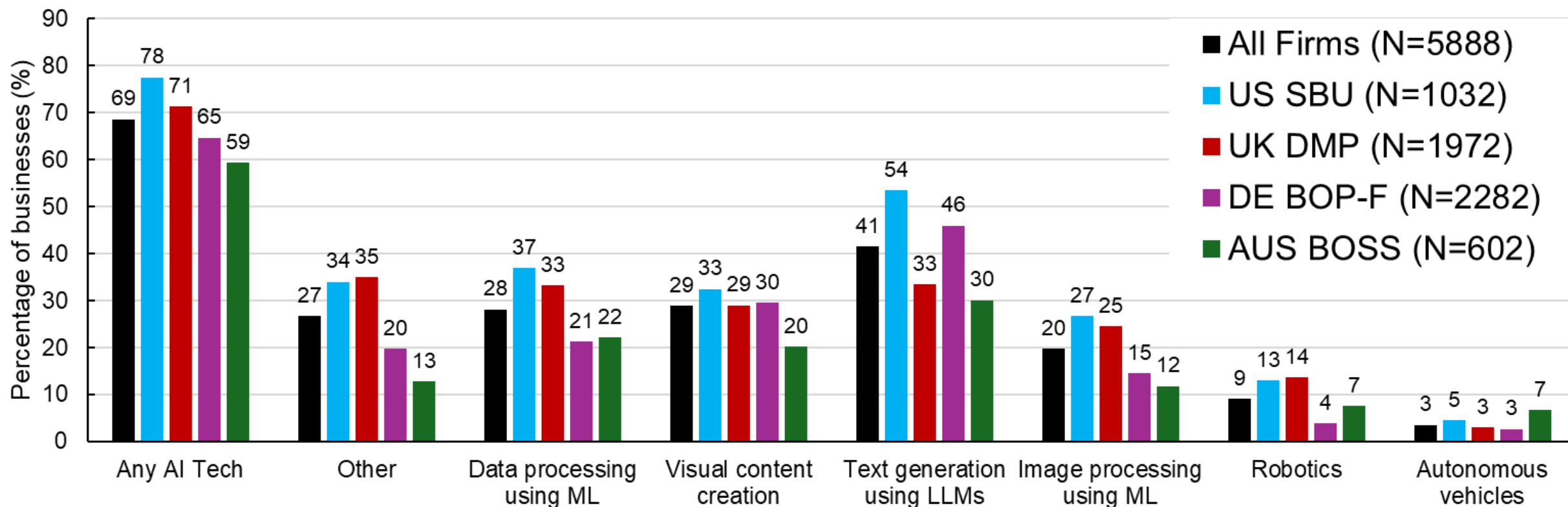


UK Firms
(DMP)



Notes: This figure shows binned scatter plots of the relationship between expected year-ahead sales growth and annual sales growth a year later at the firm level (Panel A) and expected year-ahead employment growth and annual employment growth a year later (Panel B). The sample from the SBU covers 2014-2025. The sample from the UK DMP covers 2017-2025.

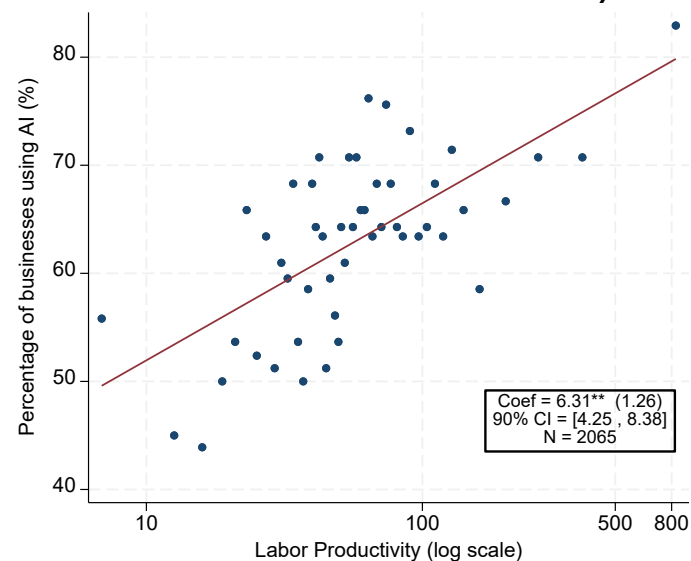
Figure 5 Current use of AI technologies by businesses



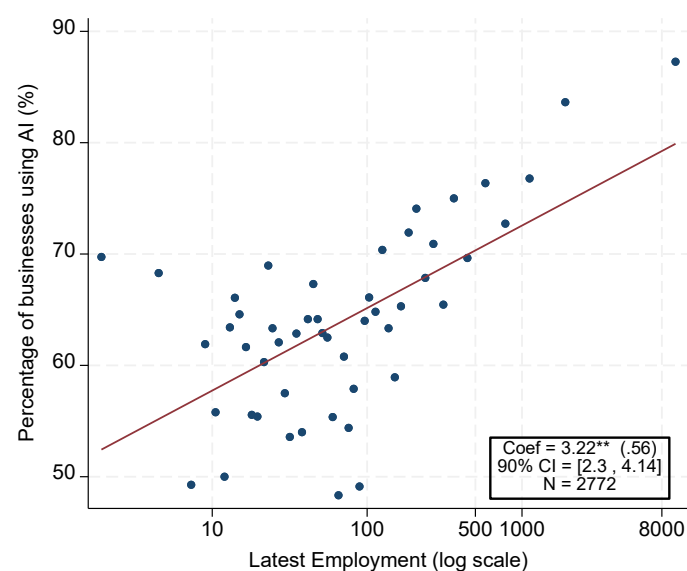
Notes: This figure is based on responses to the question: “Which of the following artificial intelligence technologies, if any, does your business currently use?” Firms could select more than one option. The data from the US Survey of Business Uncertainty was collected in November 2025. The data from the UK Decision Maker Panel was collected over November 2025 – January 2026. The data from the German Bundesbank Online Panel-Firms (BOP-F) was collected in January 2026. The data from the Australian Business Outlook Scenarios Survey was collected in December 2025. The data results from the SBU, DMP, and BOP-F are employment-weighted; the results from the BOSS are unweighted. The results for all firms is the average of the four surveys, weighted by the respective number of responses.

Figure 6 Characteristics of firms using AI technologies (UK Firms)

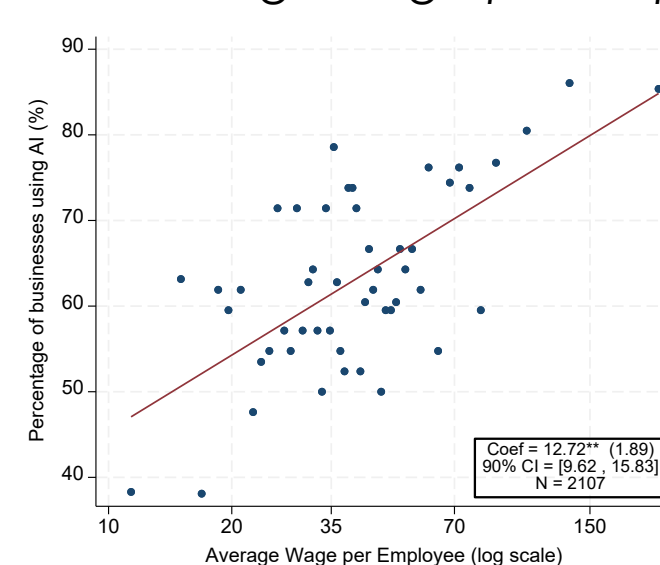
Panel A Labor Productivity



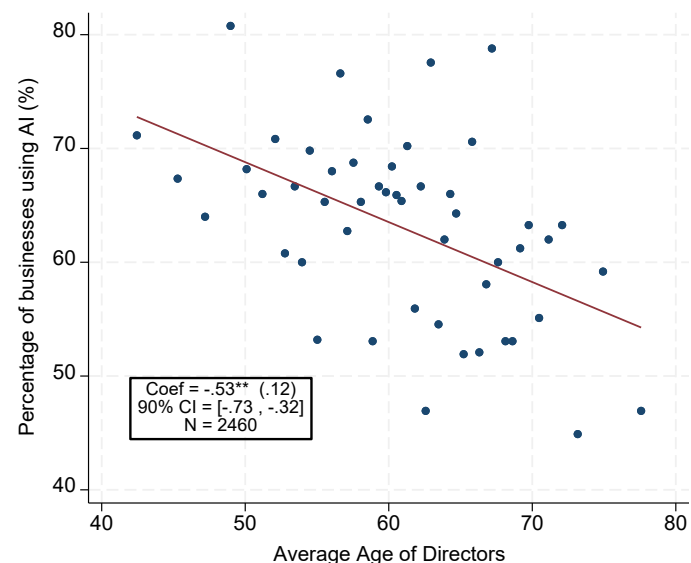
Panel B Firm employment



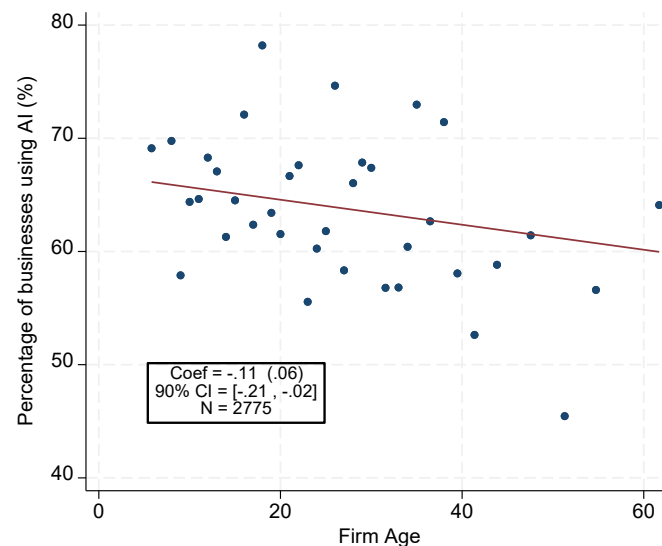
Panel C Average wage per employee



Panel D Average age of directors



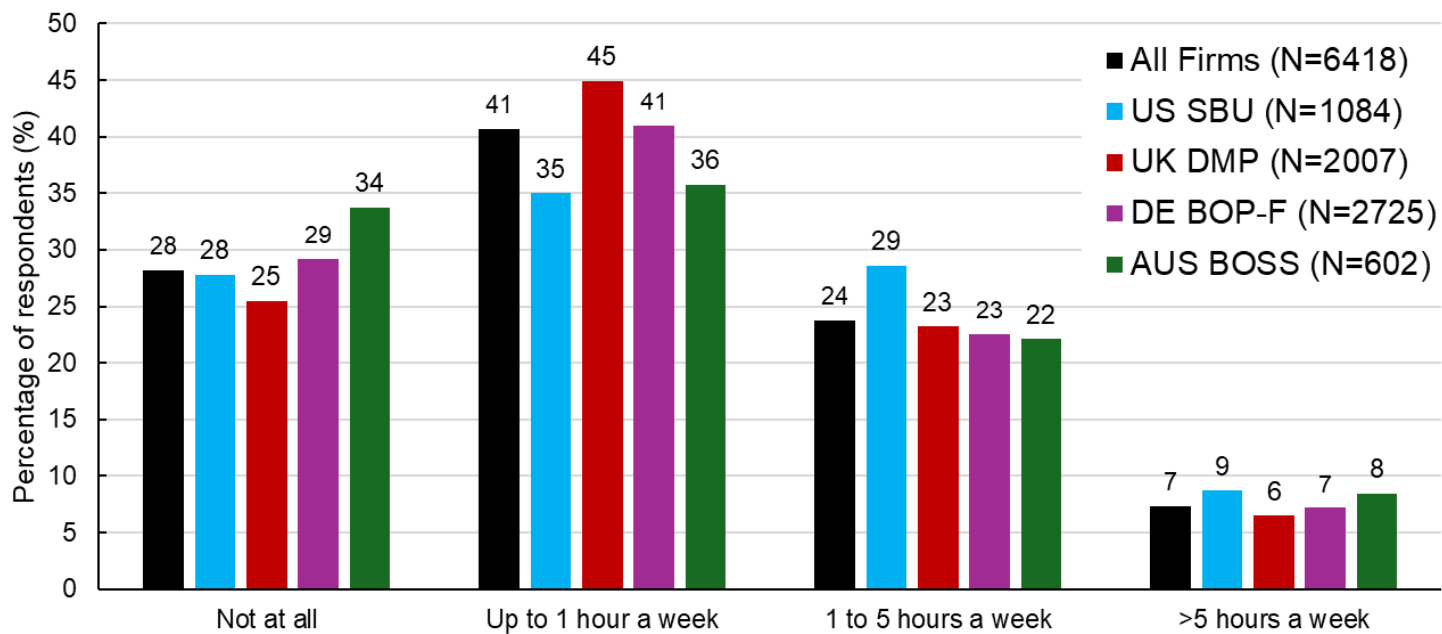
Panel E Firm age



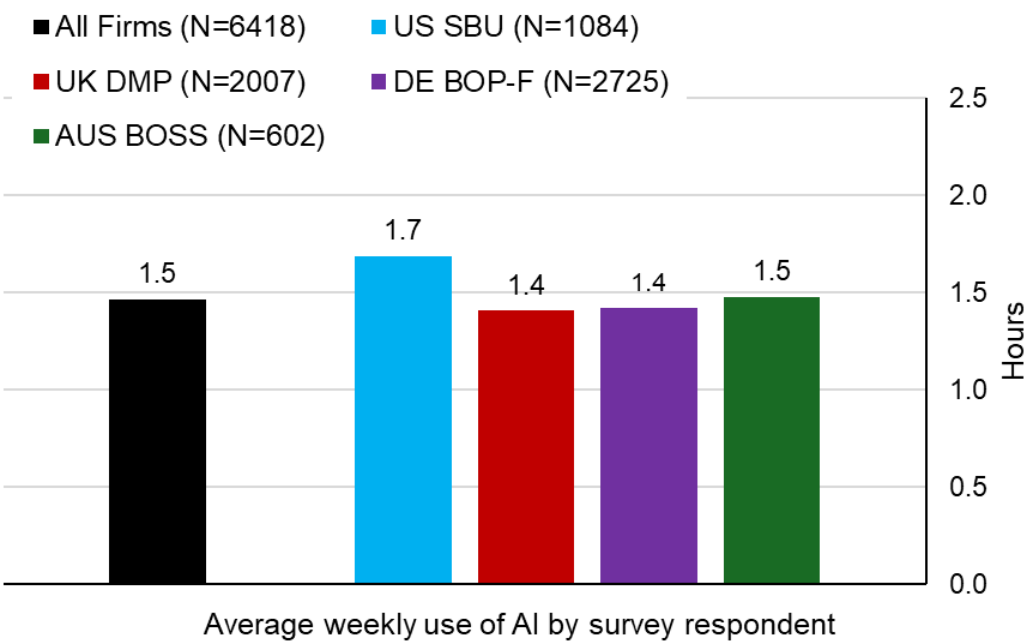
Notes: This figure shows binned scatter plots. The vertical axis is the percentage of businesses currently using any AI technology. The data are from the UK Decision Maker Panel, collected over February-April 2025 and November 2025 – January 2026, with the latest firm observation used in the figures.

Figure 7 Frequency of AI use by survey respondent

Panel A Distribution of responses



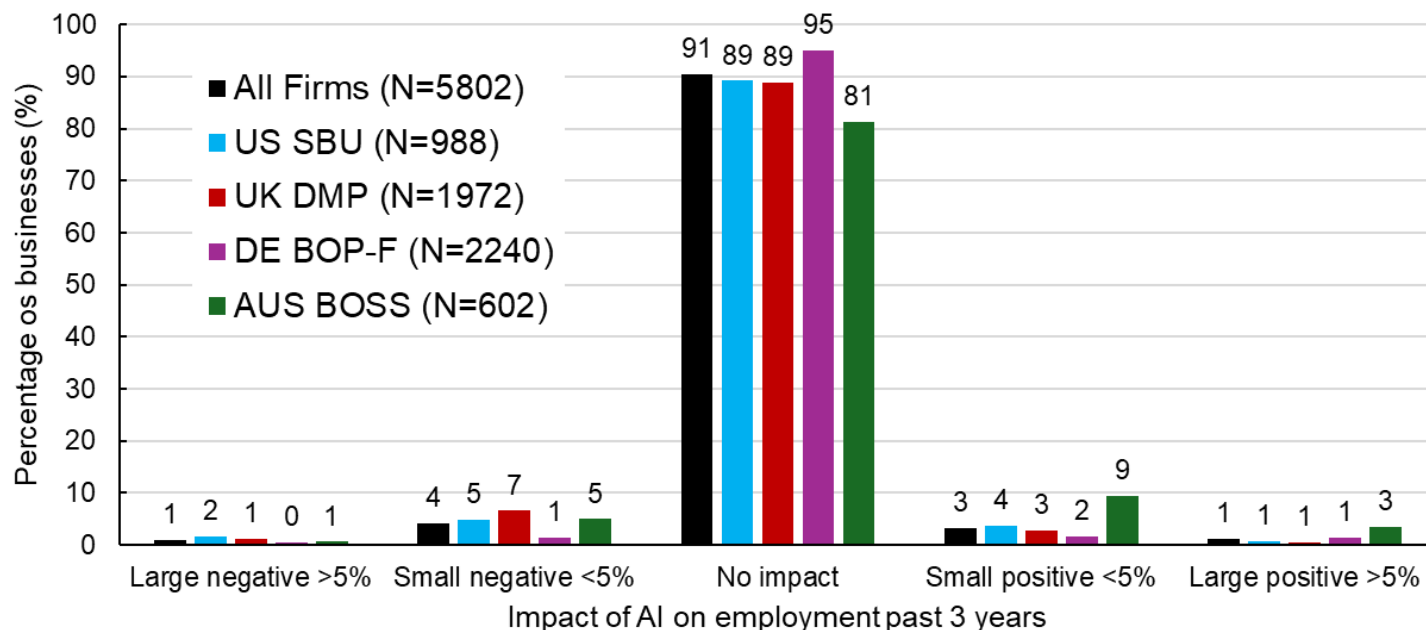
Panel B Average AI use per week



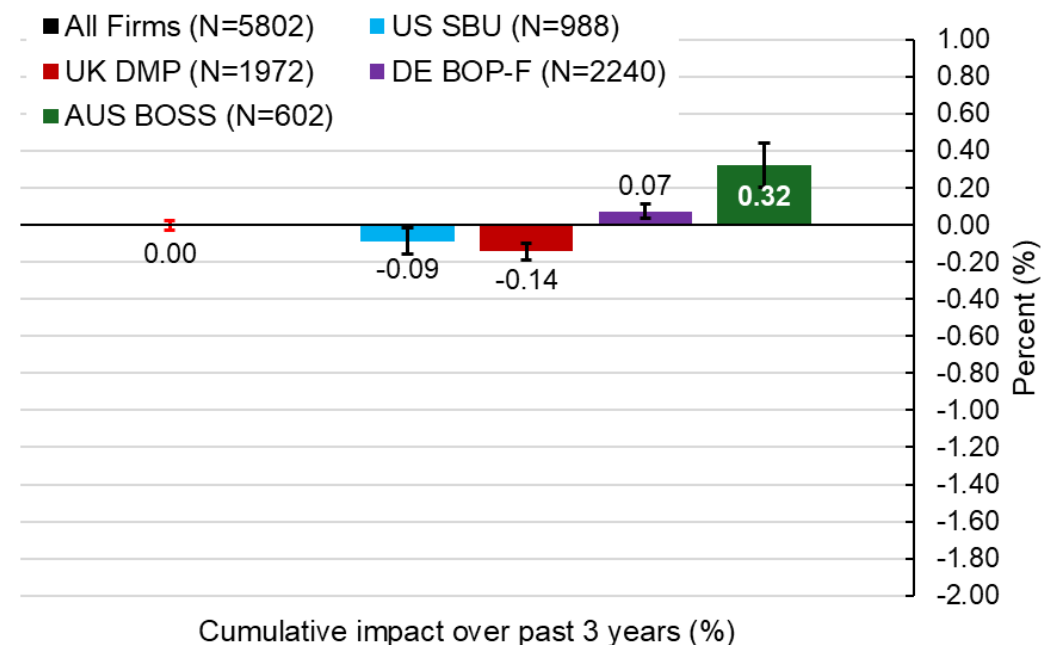
Notes: This figure is based on responses to the question: “On average, how frequently do you personally use artificial intelligence technologies in a typical working week?” The data from the US Survey of Business Uncertainty was collected in November 2025. The data from the UK Decision Maker Panel was collected over November 2025 – January 2026. The data from the Australian Business Outlook Scenarios Survey was collected in December 2025. The data from the German Bundesbank Online Panel – Firms (BOP-F) were collected in January 2026. The data results from the SBU, DMP, and BOP-F are employment-weighted; the results from the BOSS are unweighted. The results for all firms is the average of the four surveys, weighted by the respective number of responses. To calculate the average use per week (Panel B), values are assigned to each of the options in Panel A: 0 to “Not at all”; 0.5 to “up to 1 hour a week”; 3 to “1 to 5 hours a week”; 7.5 to “>5 hours a week”.

Figure 8 Impact of AI on employment over past 3 years

Panel A Distribution of responses



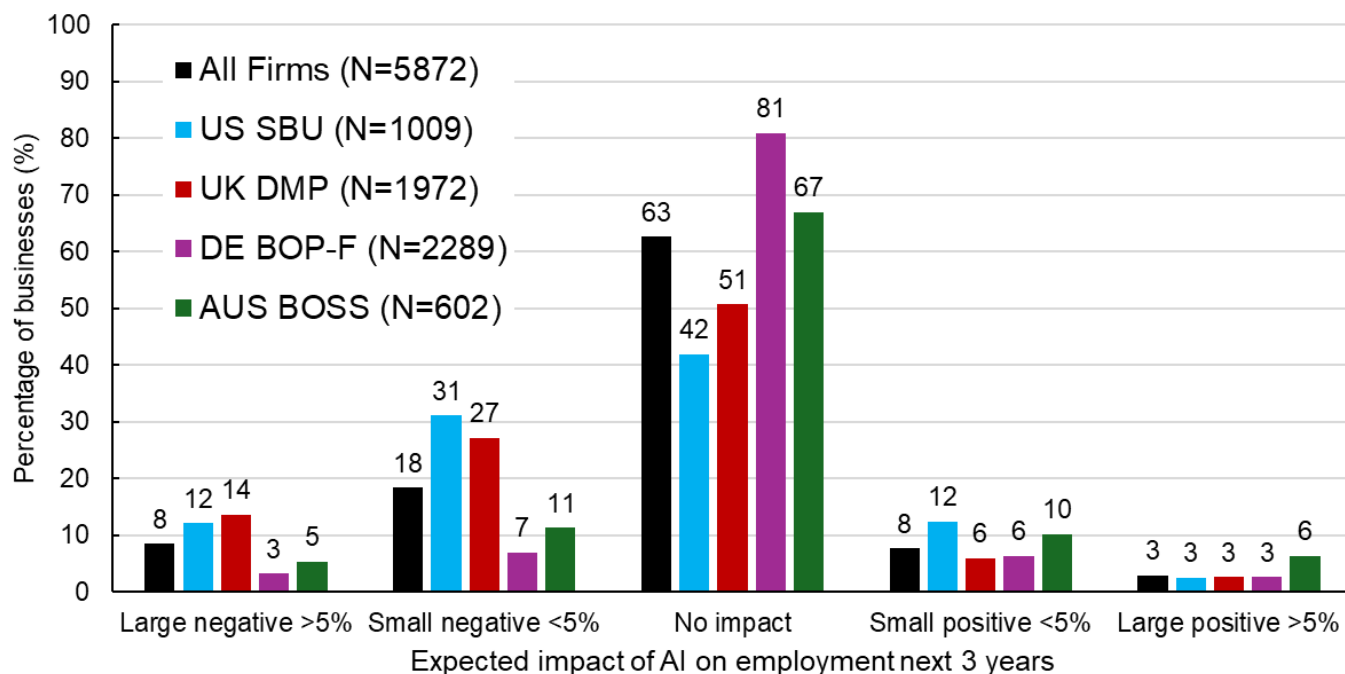
Panel B Average impacts



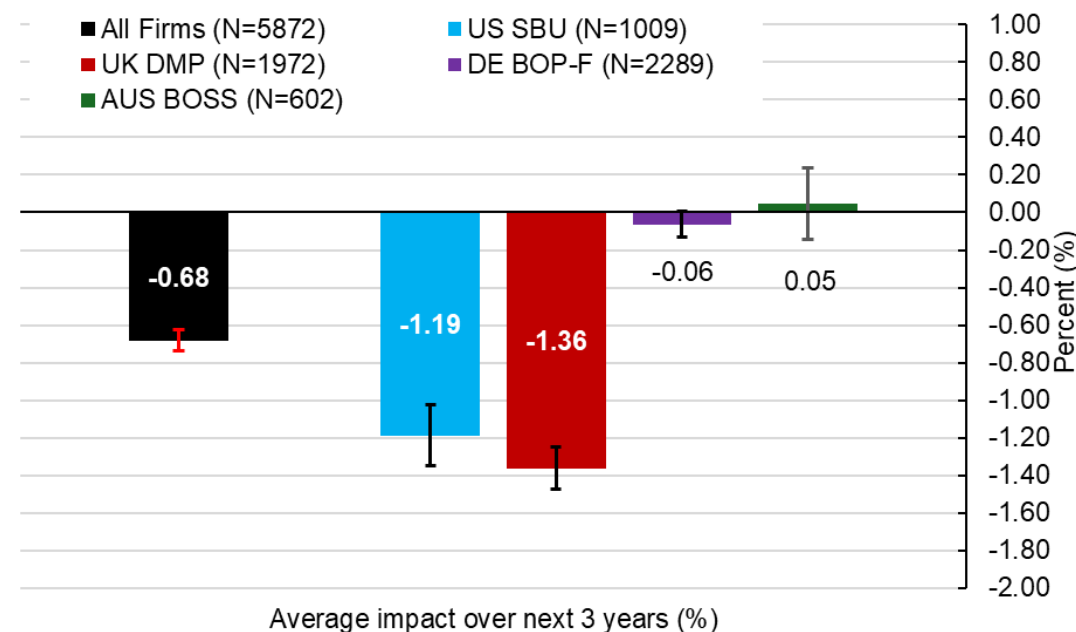
Notes: This figure is based on responses to the question: “How has the adoption of artificial intelligence technologies affected the number of employees in your business over the past three years?” The data from the US Survey of Business Uncertainty was collected in November 2025. The data from the UK Decision Maker Panel was collected over November 2025 – January 2026. The data from the German Bundesbank Online Panel-Firms (BOP-F) was collected in January 2026. The data from the Australian Business Outlook Scenarios Survey was collected in December 2025. The data results from the SBU, DMP, and BOP-F are employment-weighted; the results from the BOSS are unweighted. To calculate the average impacts (Panel B), values are assigned to each of the options in Panel A: large negative/large positive impacts are treated as $\pm 7.5\%$; small negative/small positive impacts are treated as $\pm 2.5\%$. The impact for all firms is the average of the impacts for the four surveys, weighted by the respective number of responses. 90% confidence intervals are shown for these impacts.

Figure 9 Expected impact of AI on employment over next 3 years

Panel A Distribution of responses



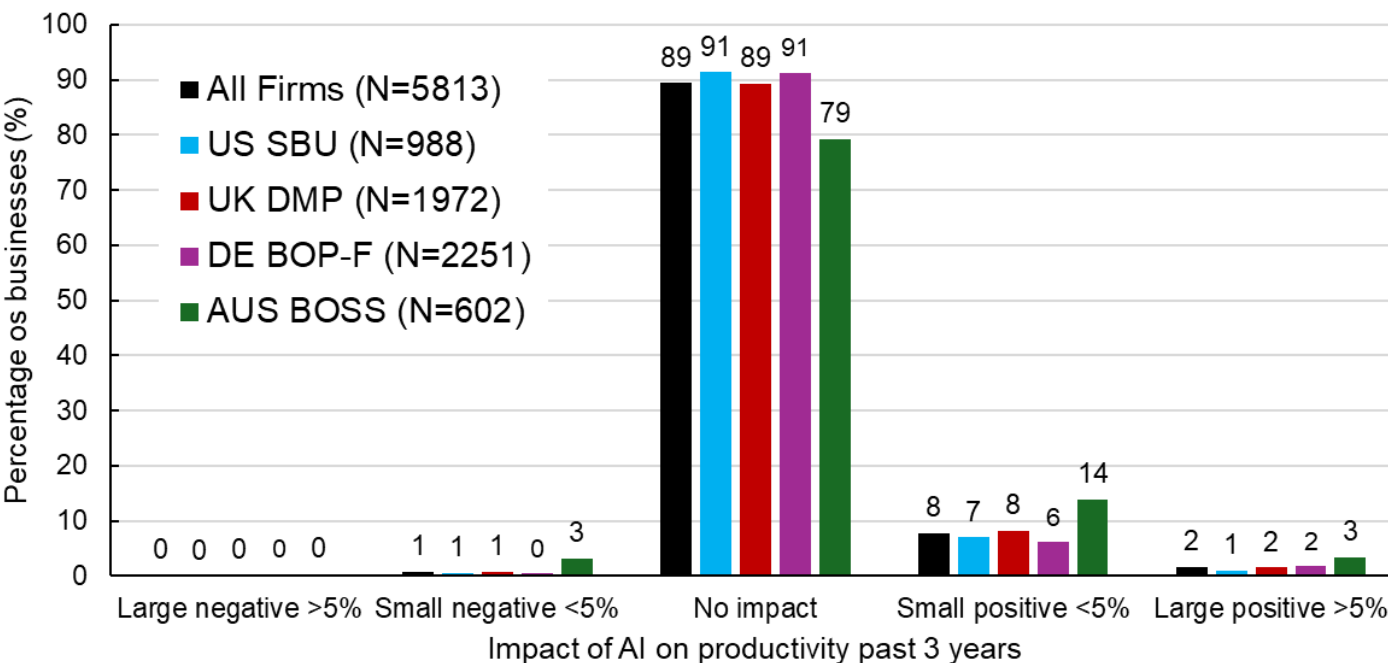
Panel B Average impacts



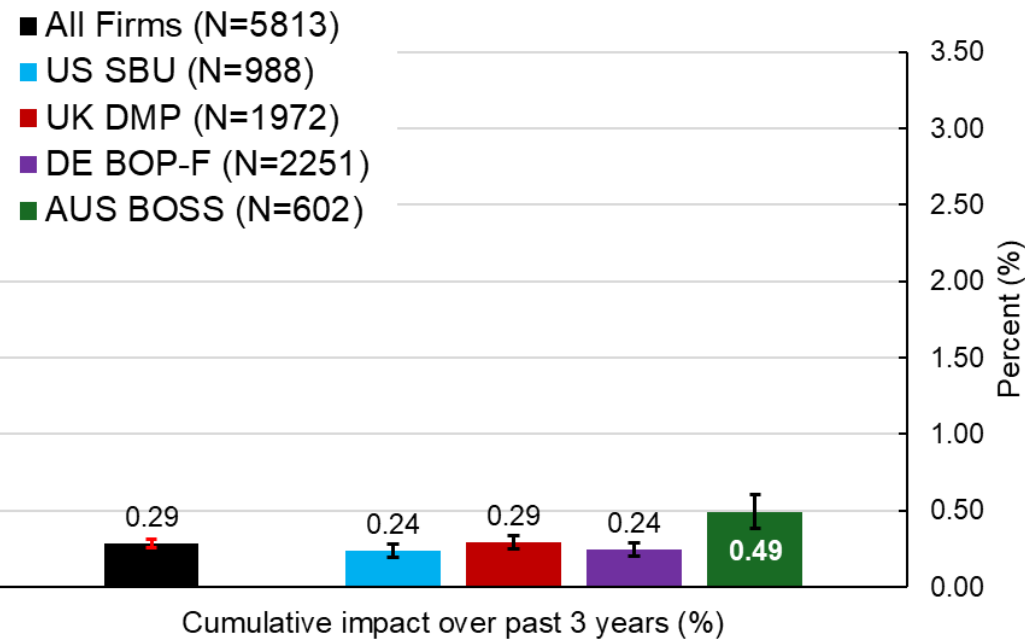
Notes: This figure is based on responses to the question: “How has the adoption of artificial intelligence technologies affected the number of employees in your business over the past three years? And how do you expect this to affect your number of employees over the next 3 years?” The data from the US Survey of Business Uncertainty was collected in November 2025. The data from the UK Decision Maker Panel was collected over November 2025 – January 2026. The data from the German Bundesbank Online Panel-Firms (BOP-F) was collected in January 2026. The data from the Australian Business Outlook Scenarios Survey was collected in December 2025. The data results from the SBU, DMP, and BOP-F are employment-weighted; the results from the BOSS are unweighted. To calculate the average impacts (Panel B), values are assigned to each of the options in Panel A: large negative/large positive impacts are treated as $\pm 7.5\%$; small negative/small positive impacts are treated as $\pm 2.5\%$. The impact for all firms is the average of the impacts for the four surveys, weighted by the respective number of responses. 90% confidence intervals are shown for these impacts.

Figure 10 Impact of AI on productivity over past 3 years

Panel A Distribution of responses



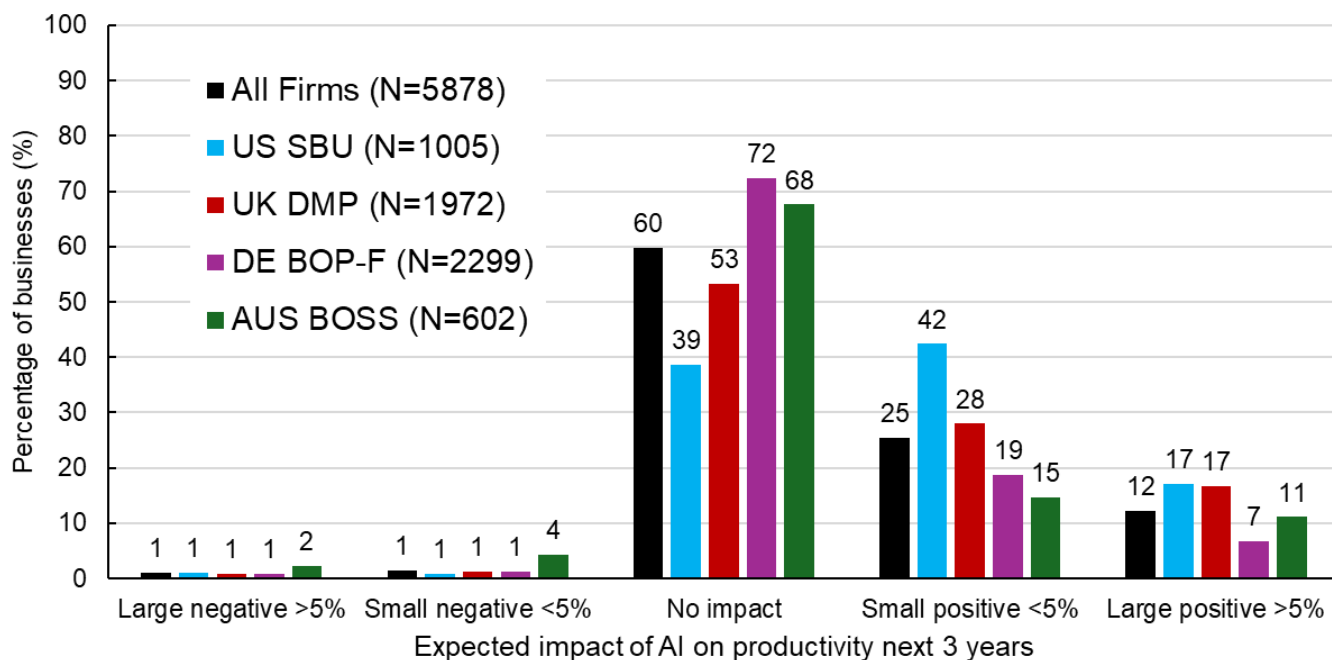
Panel B Average impacts



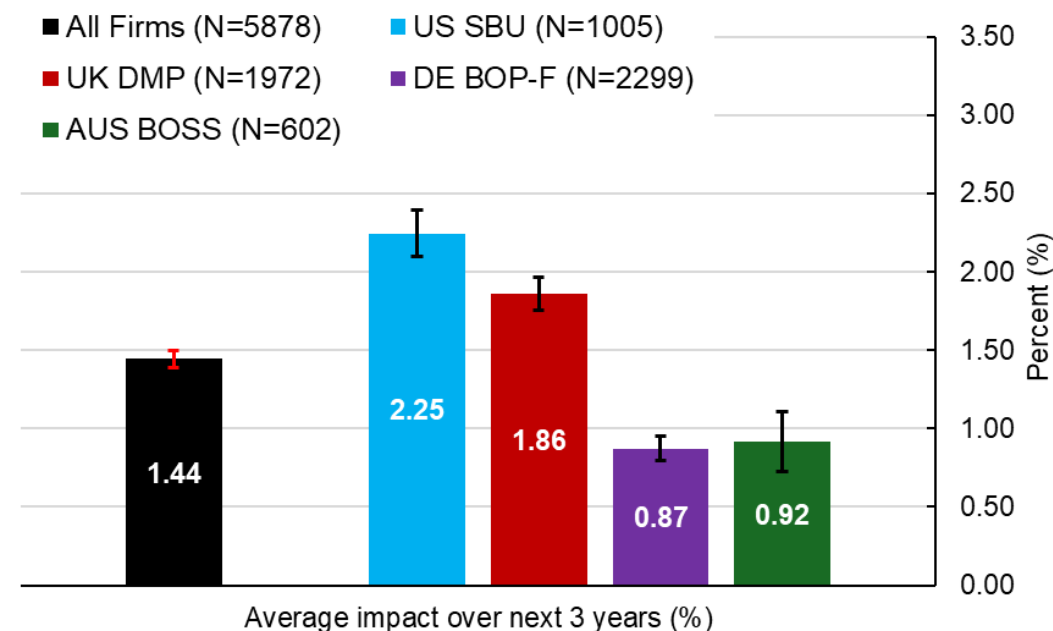
Notes: This figure is based on responses to the question: “How has the adoption of artificial intelligence technologies affected the volume of sales per employee in your business over the past three years?” The data from the US Survey of Business Uncertainty was collected in November 2025. The data from the UK Decision Maker Panel was collected over November 2025 – January 2026. The data from the German Bundesbank Online Panel-Firms (BOP-F) was collected in January 2026. The data from the Australian Business Outlook Scenarios Survey was collected in December 2025. The data results from the SBU, DMP, and BOP-F are employment-weighted; the results from the BOSS are unweighted. To calculate the average impacts (Panel B), values are assigned to each of the options in Panel A: large negative/large positive impacts are treated as $\pm 7.5\%$; small negative/small positive impacts are treated as $\pm 2.5\%$. The impact for all firms is the average of the impacts for the four surveys, weighted by the respective number of responses. 90% confidence intervals are shown for these impacts.

Figure 11 Expected impact of AI on productivity over next 3 years

Panel A Distribution of responses



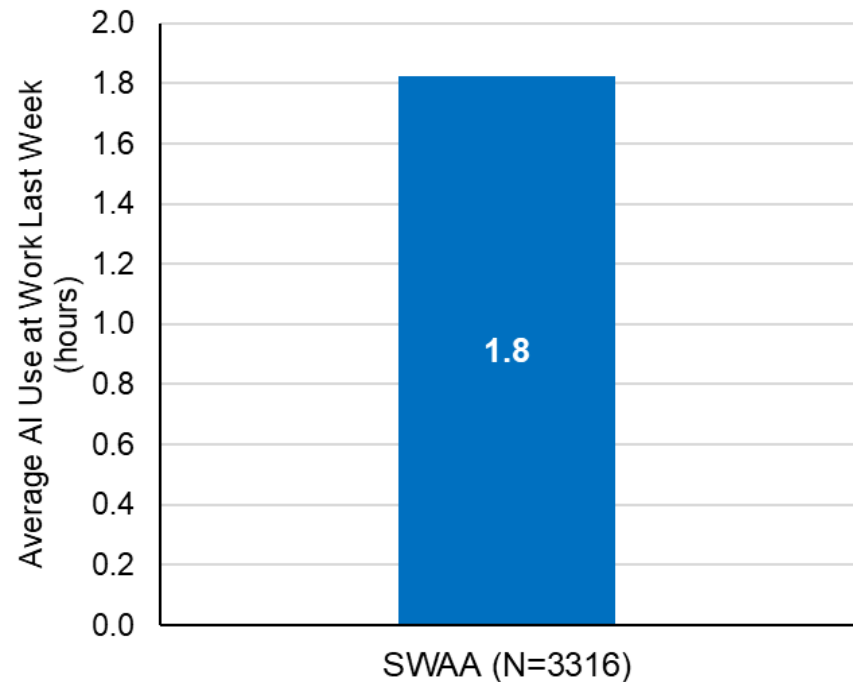
Panel B Average impacts



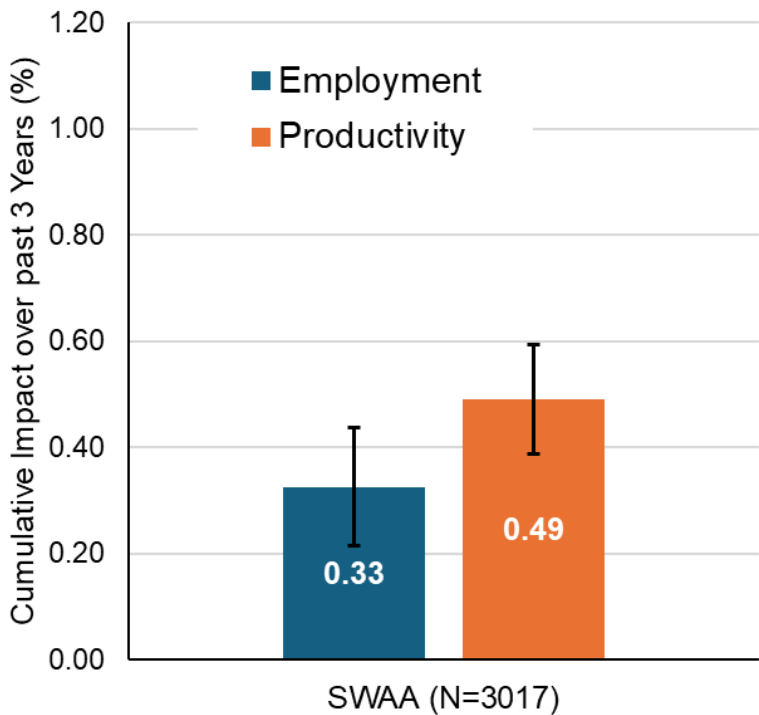
Notes: This figure is based on responses to the question: “How has the adoption of artificial intelligence technologies affected volume of sales per employee in your business over the past three years? And how do you expect this to affect your volume of sales per employee over the next 3 years?” The data from the US Survey of Business Uncertainty was collected in November 2025. The data from the UK Decision Maker Panel was collected over November 2025 – January 2026. The data from the German Bundesbank Online Panel-Firms (BOP-F) was collected in January 2026. The data from the Australian Business Outlook Scenarios Survey was collected in December 2025. The data results from the SBU, DMP, and BOP-F are employment-weighted; the results from the BOSS are unweighted. To calculate the average impacts (Panel B), values are assigned to each of the options in Panel A: large negative/large positive impacts are treated as $\pm 7.5\%$; small negative/small positive impacts are treated as $\pm 2.5\%$. The impact for all firms is the average of the impacts for the four surveys, weighted by the respective number of responses. 90% confidence intervals are shown for these impacts.

Figure 12 Impacts of AI and weekly AI use by employees

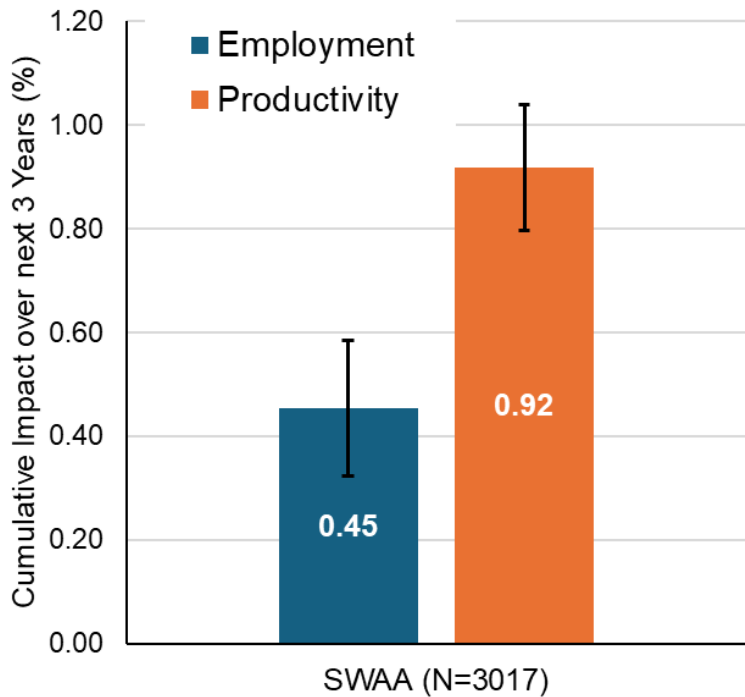
Panel A AI Use at work



Panel B Past 3 Years



Panel C Next 3 Years



Responses to the questions: You indicated that you sometimes use Generative AI for your job. Did you use Generative AI for your job LAST WEEK? Please think back to the days LAST WEEK on which you used Generative AI for your job. On average, how much time did you spend actively using Generative AI for your job How has the adoption of Artificial Intelligence technologies affected the NUMBER OF EMPLOYEES who work for your employer: over the past three years? over the next three years? How has the adoption of Artificial Intelligence technologies affected your employer's SALES PER WORKER (PRODUCTIVITY): over the past three years? over the next three years?

Notes: The sample includes respondents to the December 2025 SWAA wave who worked for pay during the week prior to the survey and pass our attention-check questions. In Panel A, we impute zero AI use for respondents who did not use it last week, or do not use it for their job. In Panels B and C, we restrict attention to wage and salary employees, (excluding self-employed workers and contractors). We reweight the raw responses to match the 2024 US population in cells defined by the cross product of age, sex, education and earnings.

Table 1 Characteristics of firms using AI technologies (UK Firms)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Dependent Variable:	Any AI Technology Currently Used (scaled by 100)												
Labor productivity (logs)	6.31*** (1.23)											3.16* (1.82)	3.04* (1.83)
Employment (logs)		3.22*** (0.51)										4.99*** (0.59)	4.88*** (0.60)
Average Wage per Employee (logs)			12.72*** (1.77)									6.43** (2.75)	6.87** (2.77)
Firm Age				-0.11* (0.06)								0.15** (0.08)	0.15* (0.08)
Average Age of Directors					-0.53*** (0.12)							-0.60*** (0.16)	-0.61*** (0.16)
Average productivity growth (2025)						0.22** (0.11)						0.24** (0.11)	
Expected productivity growth (2025)							0.38* (0.21)					0.15 (0.20)	
Average real sales growth (2025)								0.10 (0.09)					0.12 (0.09)
Expected real sales growth (2025)									0.21 (0.18)				-0.18 (0.19)
Average employment growth (2025)										-0.06 (0.10)			-0.17 (0.11)
Expected employment growth (2025)											0.22 (0.18)		0.06 (0.18)
Mean of Dependent Variable	63.6	63.6	63.6	63.6	63.6	63.6	63.6	63.6	63.6	63.6	63.6	63.7	63.7
SIC2 industry and time fixed effects	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes

Notes: The dependent variable is an indicator for whether the firm currently uses an AI technology, scaled by 100 for interpretability. The data from the UK Decision Maker Panel was collected over February-April 2025 and November 2025 – January 2026, with the latest firm observation used in the regressions (N=2,793). A constant has also been estimated, but not reported in the table. Where data are missing for a particular variable a dummy variable is included to account for that (results not reported). Standard errors are clustered at the firm level, stars indicate *** p<0.01, ** p<0.05, * p<0.1.

Table 2 Determinants of expected AI employment impacts (UK Firms)

Dependent Variable:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Expected AI Employment Impact over next 3 Years (%)												
Labor productivity (logs)	-0.10 (0.07)											-0.08 (0.12)	-0.11 (0.12)
Employment (logs)		-0.18*** (0.03)										-0.20*** (0.04)	-0.20*** (0.04)
Average Wage per Employee (logs)			-0.19* (0.10)									-0.05 (0.18)	-0.10 (0.17)
Firm Age				-0.00 (0.00)								-0.01 (0.00)	-0.01 (0.00)
Average Age of Directors					0.01 (0.01)							0.02* (0.01)	0.02** (0.01)
Average productivity growth (2025)						-0.01 (0.01)						-0.01 (0.01)	
Expected productivity growth (2025)							-0.02* (0.01)					-0.02 (0.01)	
Average real sales growth (2025)								0.01 (0.01)					0.00 (0.01)
Expected real sales growth (2025)									0.01 (0.01)				-0.00 (0.01)
Average employment growth (2025)										0.03*** (0.01)			0.02*** (0.01)
Expected employment growth (2025)											0.05*** (0.01)		0.05*** (0.01)
Mean of Dependent Variable	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9
SIC2 industry and time fixed effects	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes

Notes: The data from the UK Decision Maker Panel was collected over February-April 2025 and November 2025 – January 2026, with the latest firm observation used in the regressions. A constant has also been estimated, but not reported in the table (N=2,793). Where data are missing for a particular variable a dummy variable is included to account for that (results not reported). Standard errors are clustered at the firm level, stars indicate *** p<0.01, ** p<0.05, * p<0.1.

Table 3 Determinants of expected AI productivity impacts (UK Firms)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Dependent Variable:	Expected AI Productivity Impact over next 3 Years (%)												
Labor productivity (logs)	0.01 (0.06)											-0.17 (0.10)	-0.18* (0.10)
Employment (logs)		0.06* (0.03)										0.15*** (0.04)	0.14*** (0.04)
Average Wage per Employee (logs)			0.29*** (0.10)									0.36** (0.16)	0.38** (0.16)
Firm Age				-0.01*** (0.00)								-0.00 (0.00)	-0.00 (0.00)
Average Age of Directors					-0.04*** (0.01)							-0.02*** (0.01)	-0.02** (0.01)
Average productivity growth (2025)						0.01 (0.01)						0.01 (0.01)	
Expected productivity growth (2025)							0.01 (0.01)					0.00 (0.01)	
Average real sales growth (2025)								0.01* (0.00)					0.00 (0.01)
Expected real sales growth (2025)									0.04*** (0.01)				0.02 (0.01)
Average employment growth (2025)										0.00 (0.01)			-0.00 (0.01)
Expected employment growth (2025)											0.03*** (0.01)		0.02* (0.01)
Mean of Dependent Variable	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
SIC2 industry and time fixed effects	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes

Notes: The data from the UK Decision Maker Panel was collected over February-April 2025 and November 2025 – January 2026, with the latest firm observation used in the regressions (N=2,793). A constant has also been estimated, but not reported in the table. Where data are missing for a particular variable a dummy variable is included to account for that (results not reported). Standard errors are clustered at the firm level, stars indicate *** p<0.01, ** p<0.05, * p<0.1.

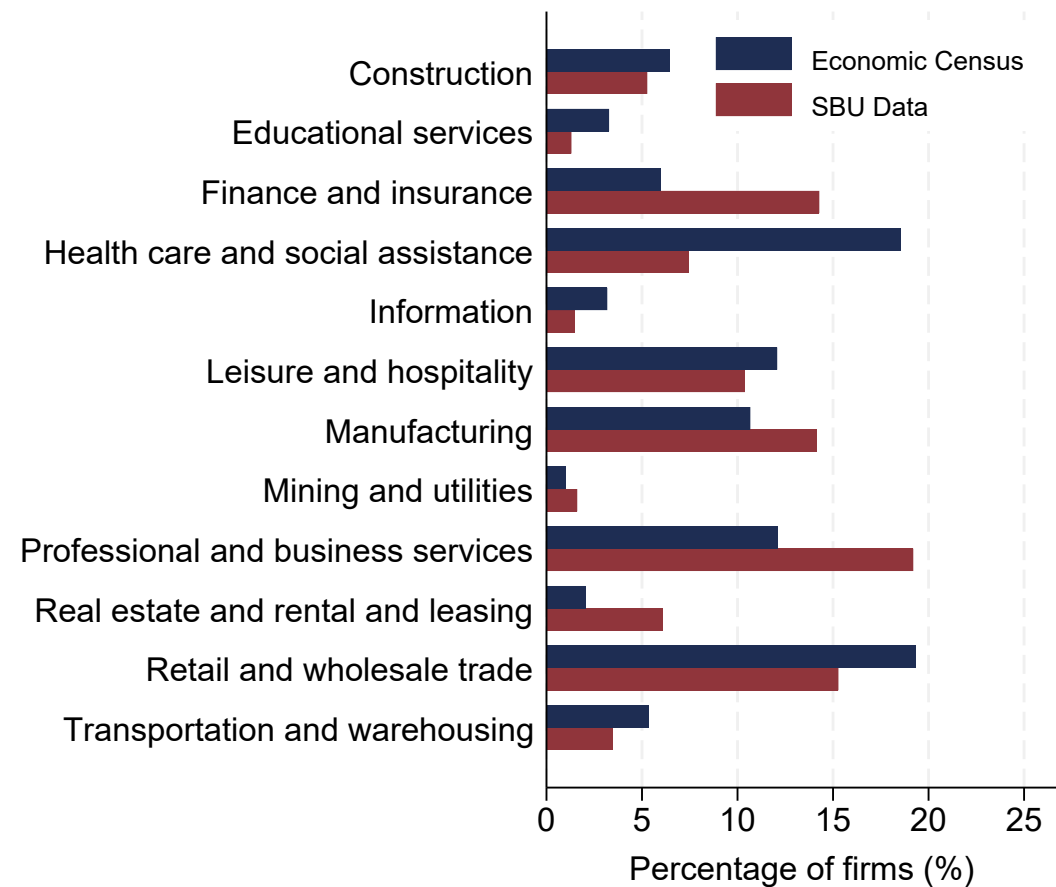
Table 4 Summary of realised and expected AI impacts

	Firms					Employees
	All	US (SBU)	UK (DMP)	Germany (BOP-F)	Australia (BOSS)	US (SWAA)
<i>Cumulative impact over past 3 years (%)</i>						
Sales/Employee	0.29	0.24	0.29	0.24	0.49	0.49
Employment	0.00	-0.09	-0.14	0.07	0.32	0.33
Output (implied)	0.28	0.15	0.15	0.32	0.82	0.82
<i>Expected cumulative impact over next 3 years (%)</i>						
Sales/Employee	1.44	2.25	1.86	0.87	0.92	0.92
Employment	-0.68	-1.19	-1.36	-0.06	0.05	0.45
Output (implied)	0.76	1.06	0.50	0.81	0.96	1.37

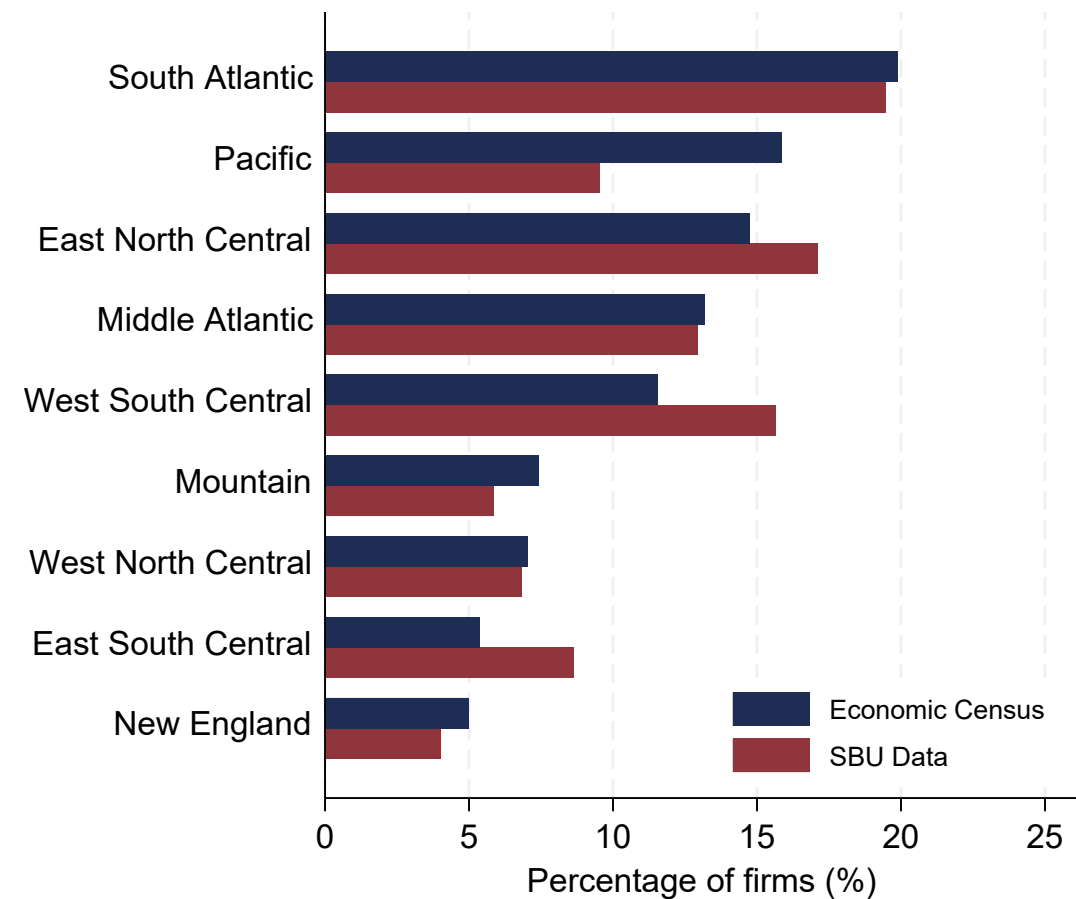
Notes: This table summarises the realised and expected AI impacts on sales per employee and employment from Figures 8-11. The implied impacts on output are calculated as the sum of the sales/employee and employment impacts.

Figure A1 SBU vs. US industrial and regional distribution

Panel A: By Industry



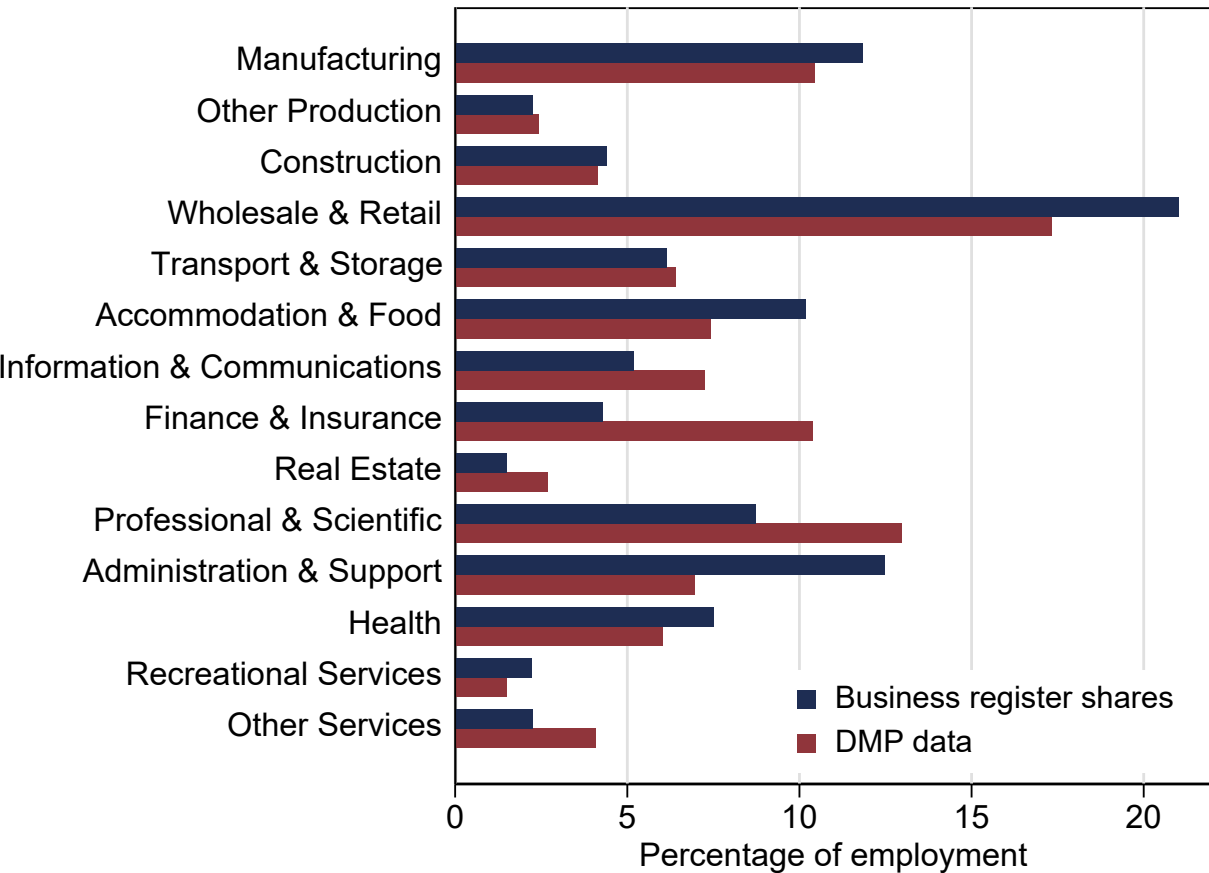
Panel B: By Region



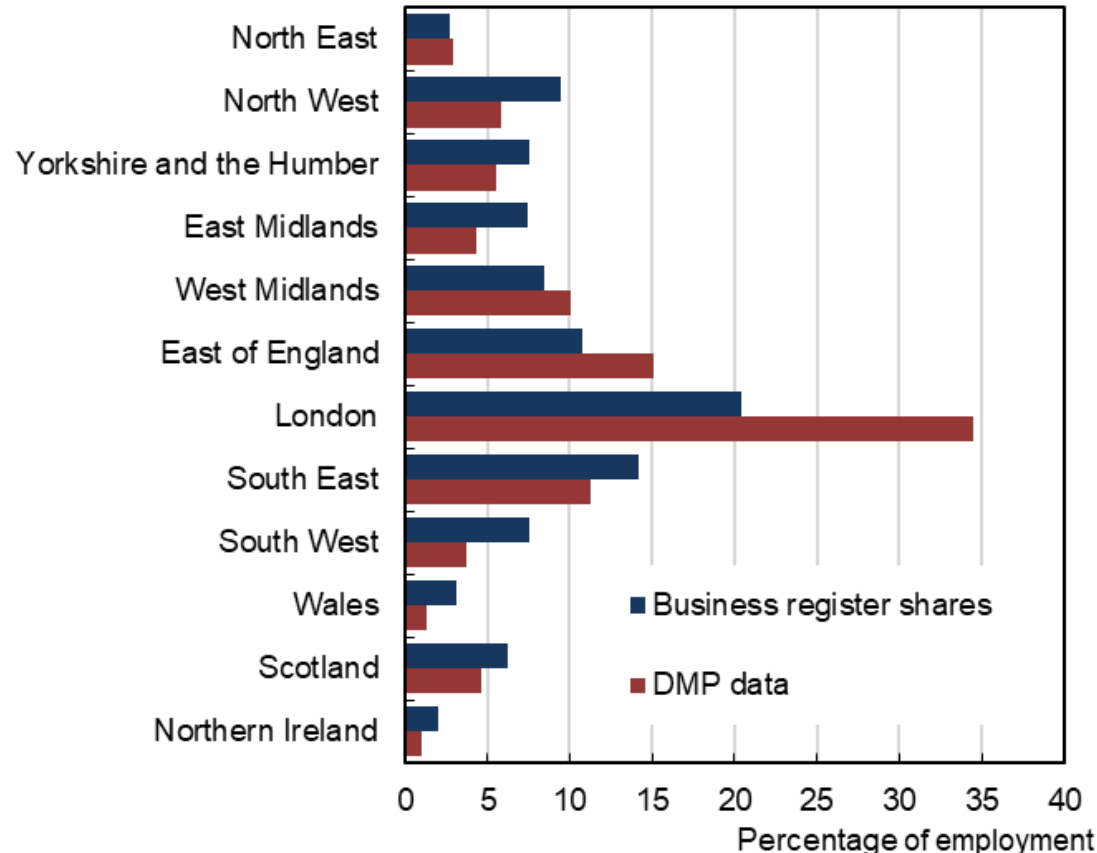
Notes: This figure compares the percentage of firms by industry (Panel A) and region (Panel B) in the US Survey of Business Uncertainty against the 2022 Economic Census. The shares are employment-weighted. Panel A is based on 6835 firms in the SBU. Panel B is based on 6995 firms in the SBU.

Figure A2 DMP vs. UK industrial and regional distribution

Panel A: By Industry

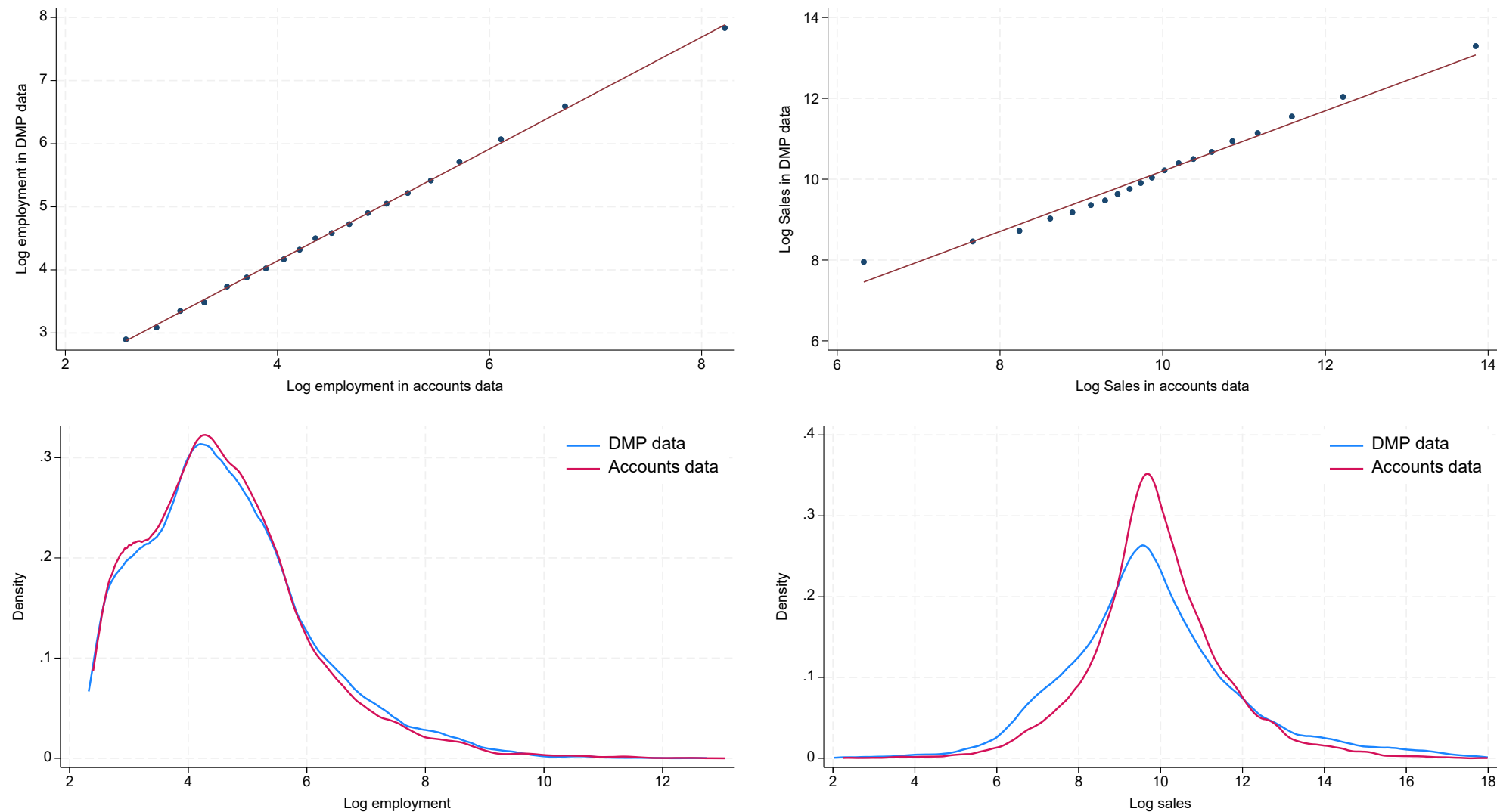


Panel B: By Region



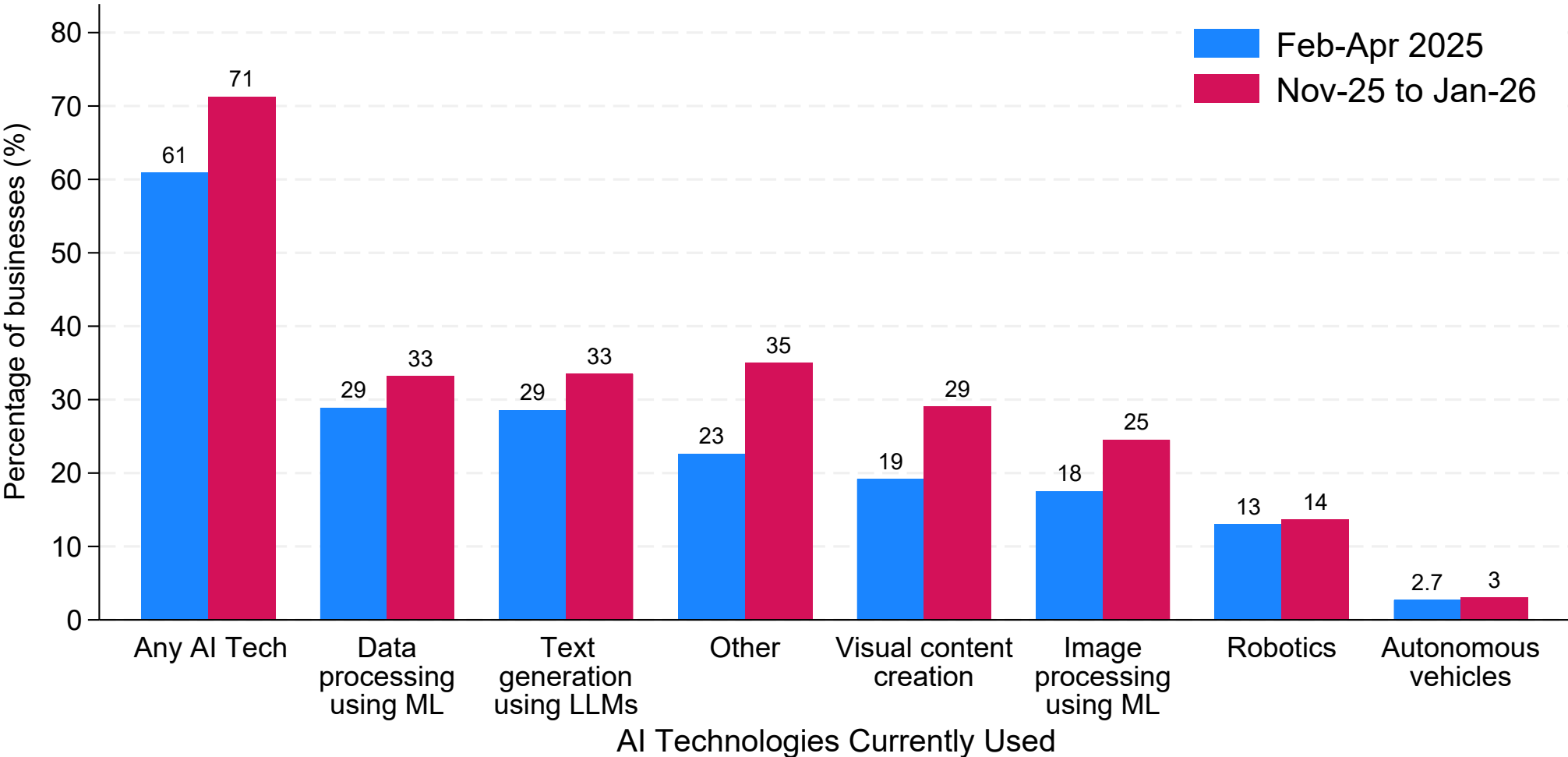
Notes: Other production includes agriculture; forestry & fishing; mining & quarrying; electricity, gas & air conditioning supply; water supply; and sewerage, waste management & remediation activities. Data are averages from 2017 to 2025.

Figure A3 Firm responses vs. company accounts data (UK firms)



Notes: Sales values from the DMP survey are annualised average quarterly sales reported by businesses across the year. DMP employment data are averages across the year. DMP data are plotted against annual company accounts data from Bureau Van Dijk for the corresponding financial year. The dots on the top charts each represent 5% of observations, grouped by log employment/sales from accounts data. Charts are based on annual data between 2017 and 2024.

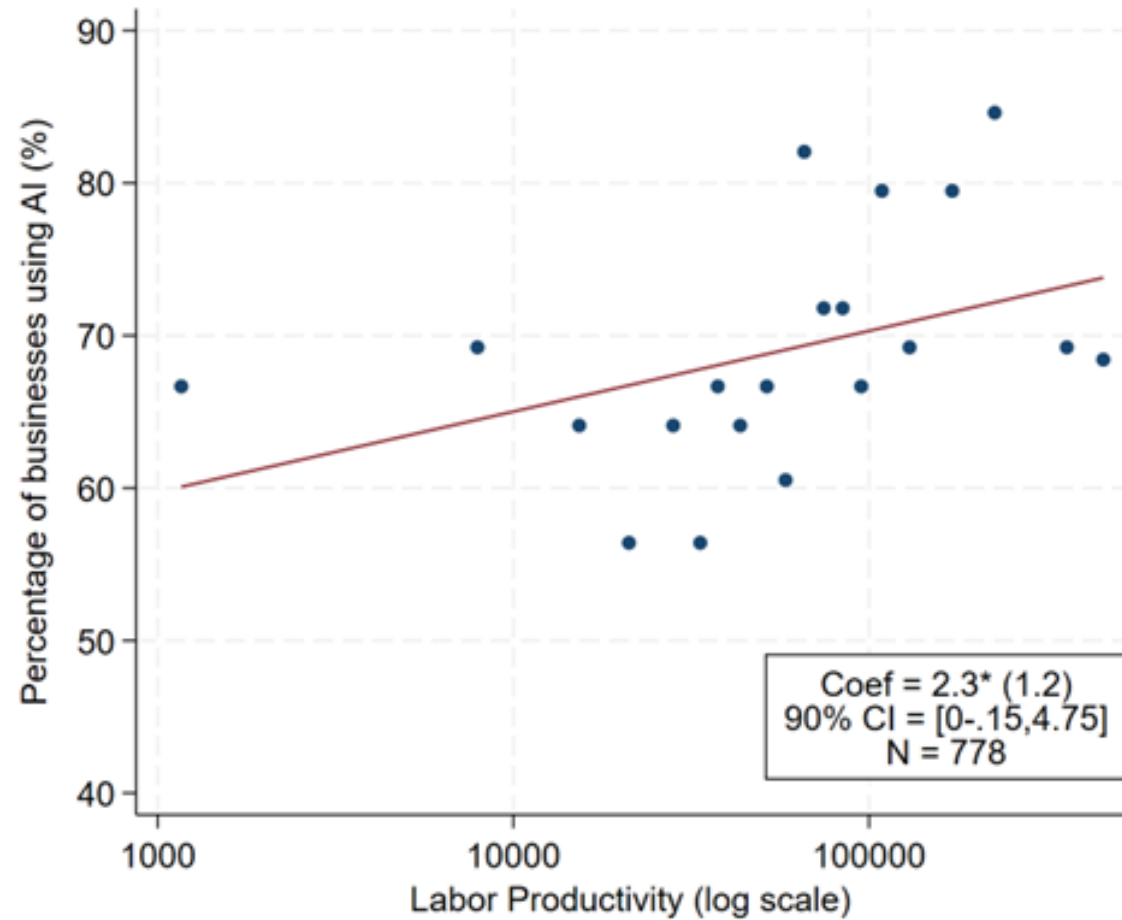
Figure A4 Change in current use of AI technologies by businesses (UK Firms)



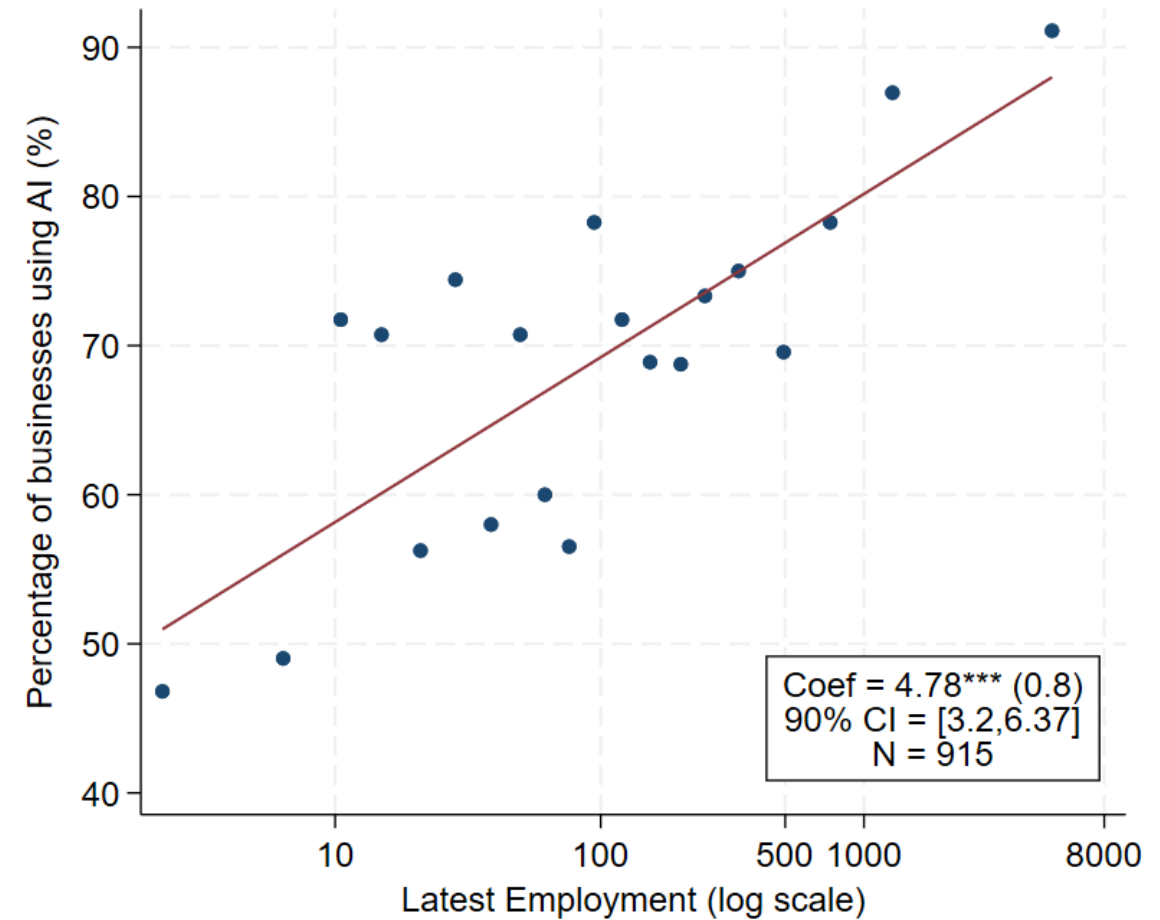
Notes: This figure is based on responses to the question: “Which of the following artificial intelligence technologies, if any, does your business currently use?” The results are based on responses from the UK Decision Maker Panel, collected over February-April 2025 and November 2025 – January 2026. The results are employment-weighted.

Figure A5 Characteristics of firms using AI technologies (US Firms)

Panel A Labor Productivity



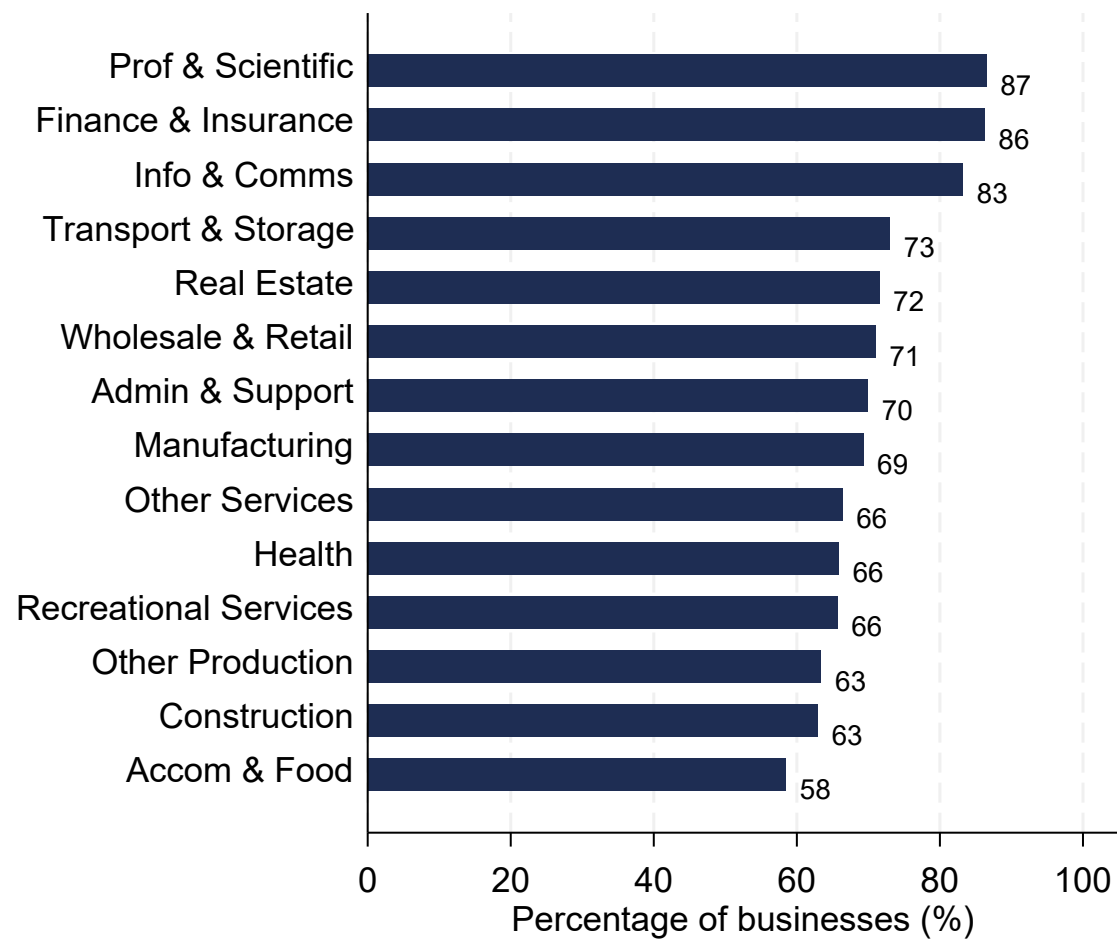
Panel B Firm employment



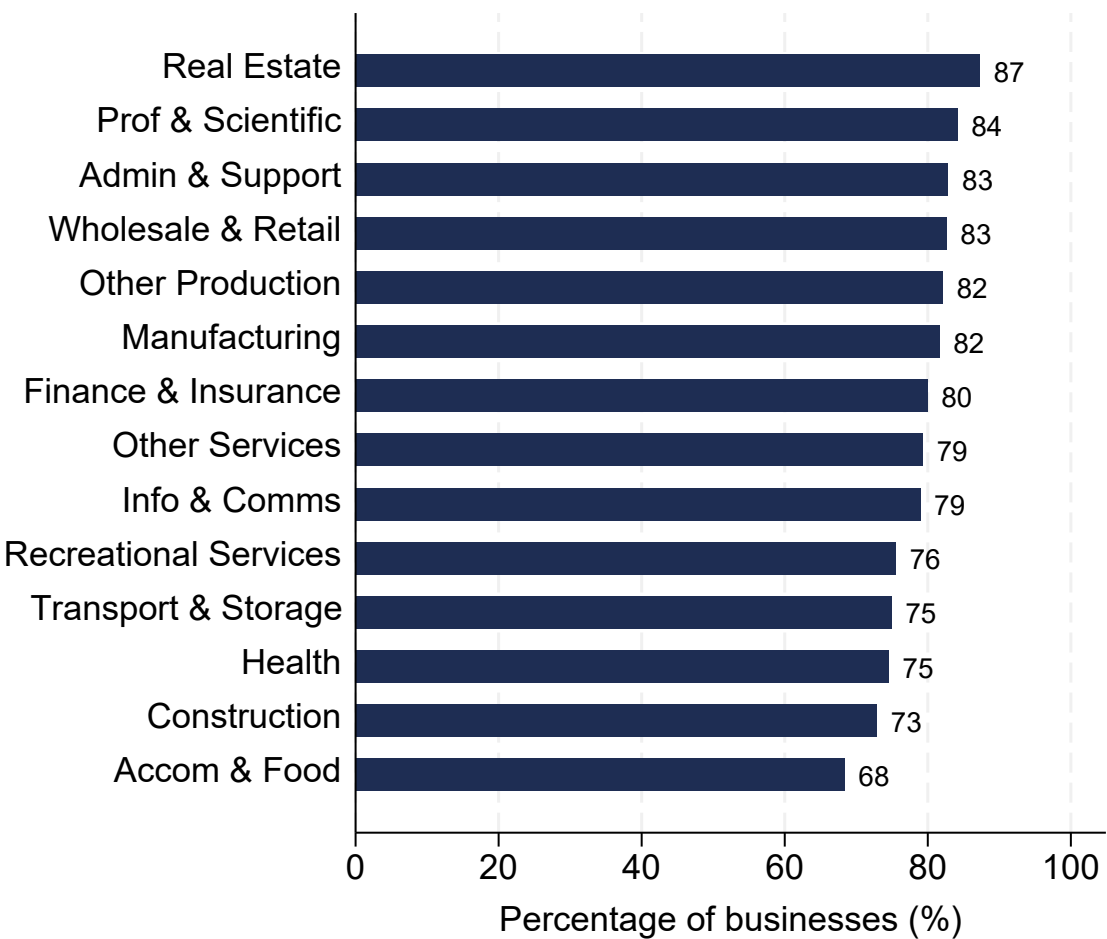
Notes: This figure shows binned scatter plots. The vertical axis is the percentage of businesses currently using any AI technology. The data are from the US Survey of Business Uncertainty, collected in November 2025. Labor productivity is defined as sales revenue per employee, and deflated using 2016 gross output deflators.

Figure A6 Current and expected AI adoption by industry (UK firms)

Panel A Current AI Adoption

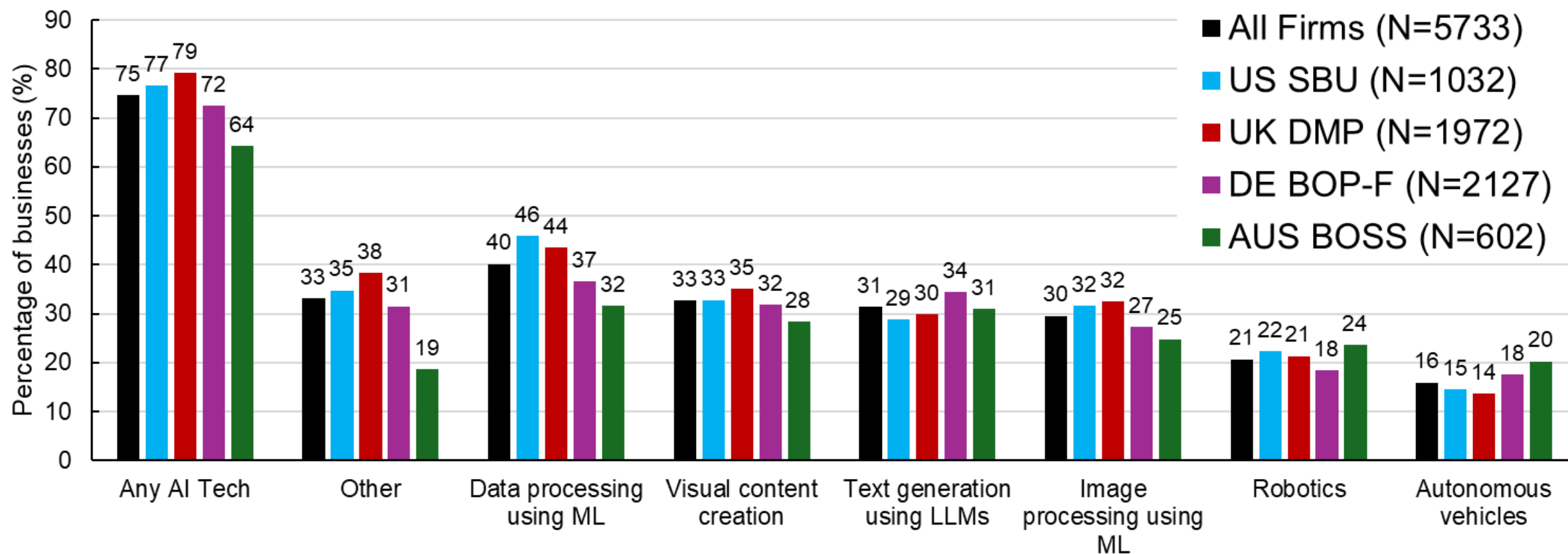


Panel B Expected Adoption Next 3



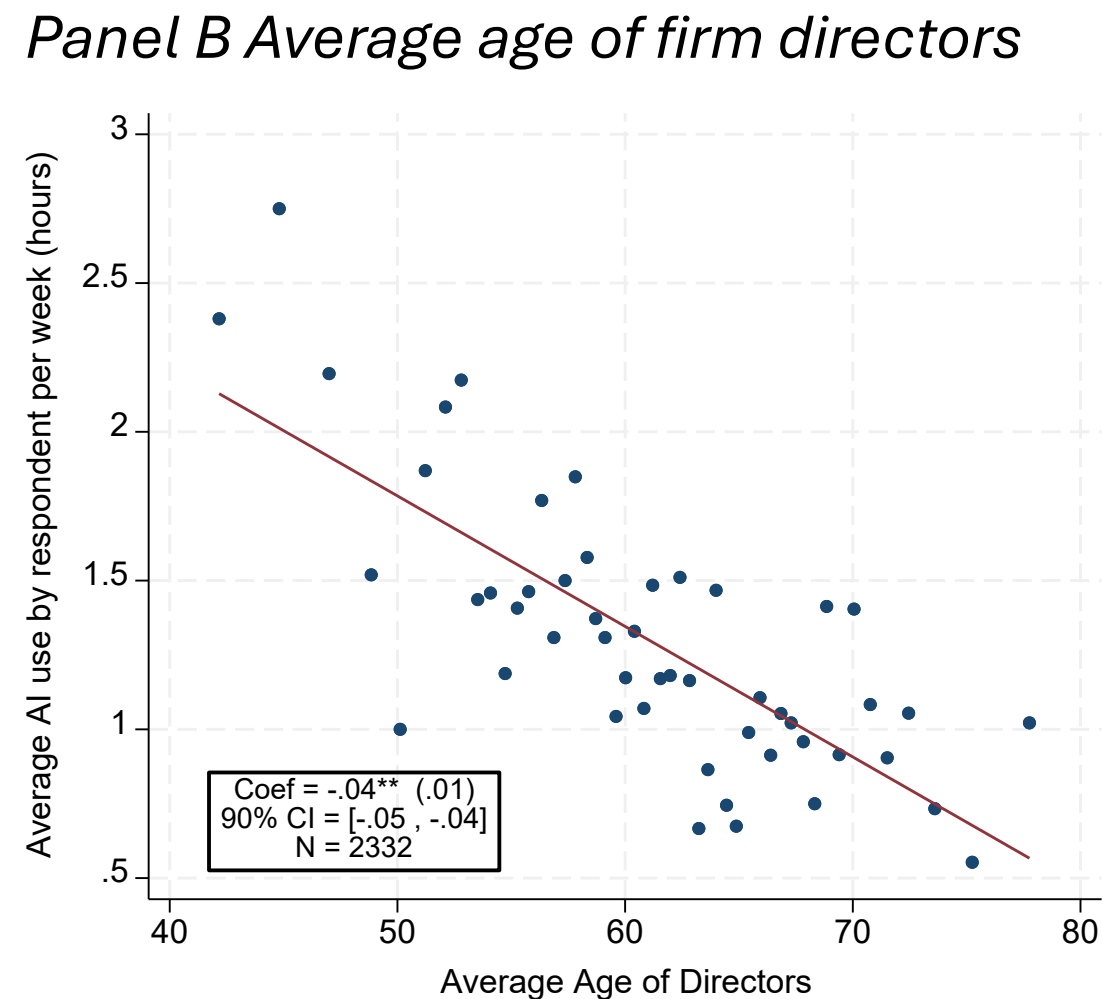
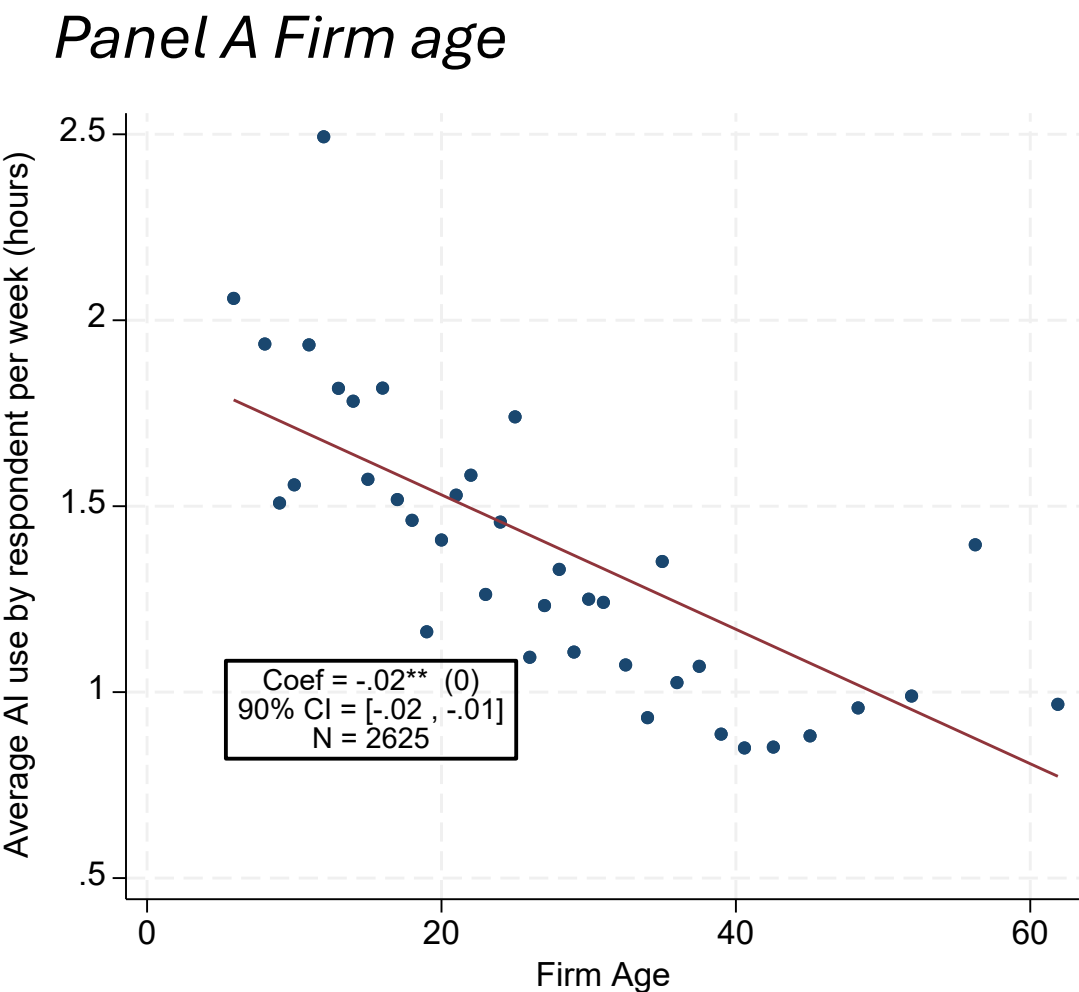
Notes: This figure is based on responses to the question: “Which of the following artificial intelligence technologies, if any, does your business currently use? And which do you intend to make use of over the next three years?” The results are based on responses from the UK Decision Maker Panel, collected over November 2025 – January 2026. The results are employment-weighted.

Figure A7 Expected use of AI technologies over next 3 years



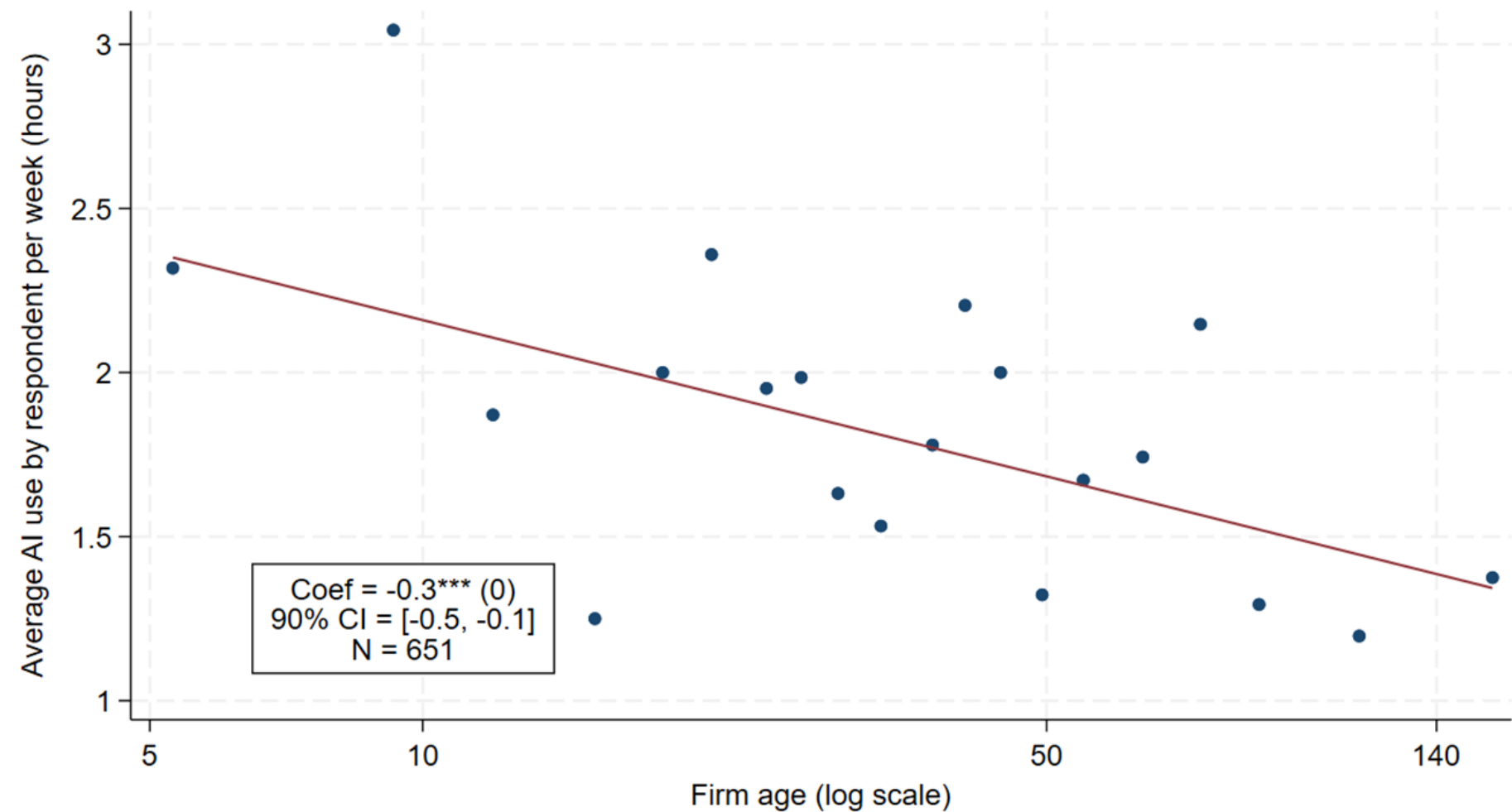
Notes: This figure is based on responses to the question: “Which of the following artificial intelligence technologies, if any, does your business currently use? And which do you intend to make use of over the next three years?” Firms could select more than one option. The data from the US Survey of Business Uncertainty was collected in November 2025. The data from the UK Decision Maker Panel was collected over November 2025 – January 2026. The data from the German Bundesbank Online Panel – Firms (BOP-F) were collected in January 2026. The data from the Australian Business Outlook Scenarios Survey was collected in December 2025. The data results from the SBU, DMP, and BOP-F are employment-weighted; the results from the BOSS are unweighted. The results for all firms is the average of the four surveys, weighted by the respective number of responses.

Figure A8.a Frequency of AI use by survey respondent: Heterogeneity by firm characteristics (UK Firms)



Notes: The binned scatter plots are based on responses from the UK Decision Maker Panel, collected over February-March 2025 and November 2025 – January 2026.

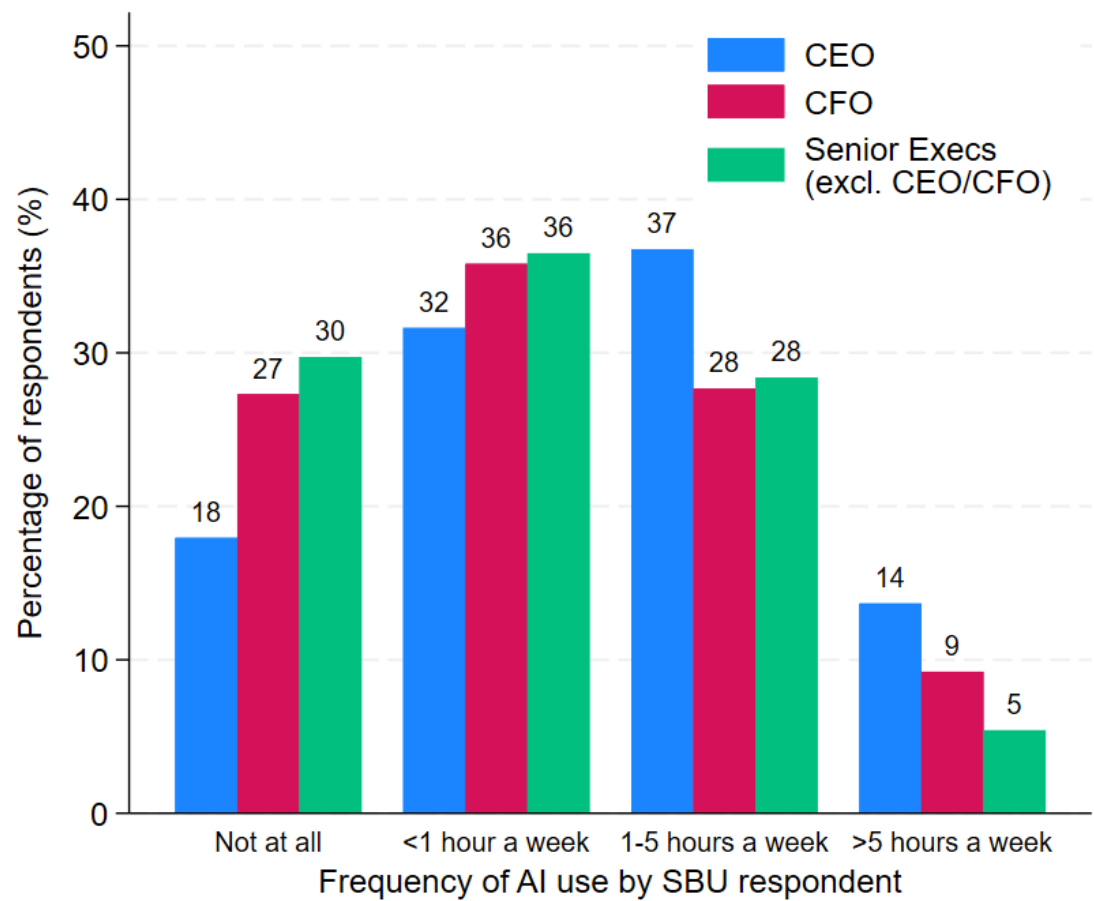
Figure A8.b Frequency of AI use by survey respondent: Heterogeneity by firm age (US Firms)



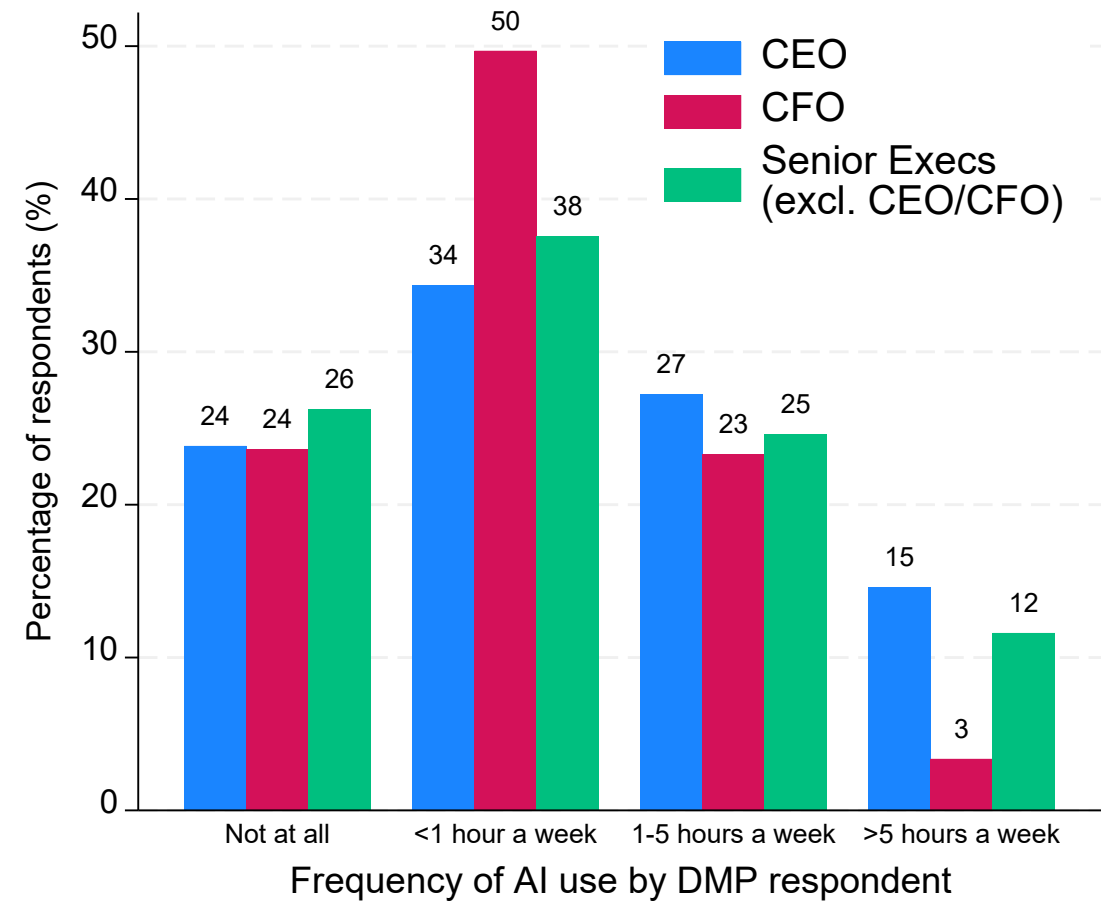
Notes: This figure presents a binned scatter plot of average weekly AI use by the survey respondent again firm age. It is based on responses to the question: “On average, how frequently do you personally use artificial intelligence technologies in a typical working week?” The data from the US Survey of Business Uncertainty was collected in November 2025.

Figure A9 Frequency of AI use by survey respondent: Heterogeneity by respondent position

Panel A US Firms (SBU)

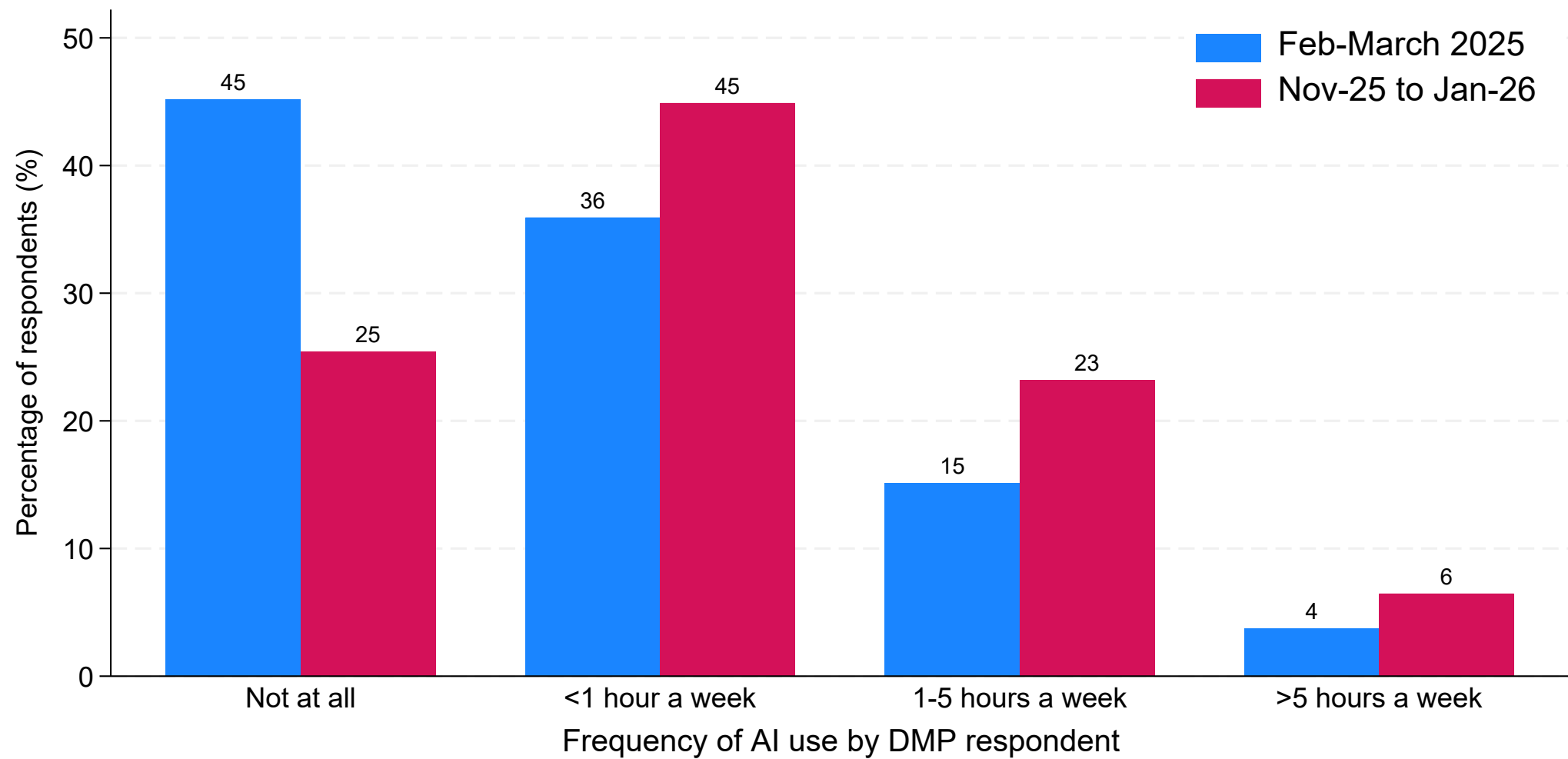


Panel B UK Firms (DMP)



Notes: This figure is based on responses to the question: “On average, how frequently do you personally use artificial intelligence technologies in a typical working week?” The data from the US Survey of Business Uncertainty was collected in November 2025. The data from the UK Decision Maker Panel was collected over November 2025 – January 2026. The data are employment-weighted.

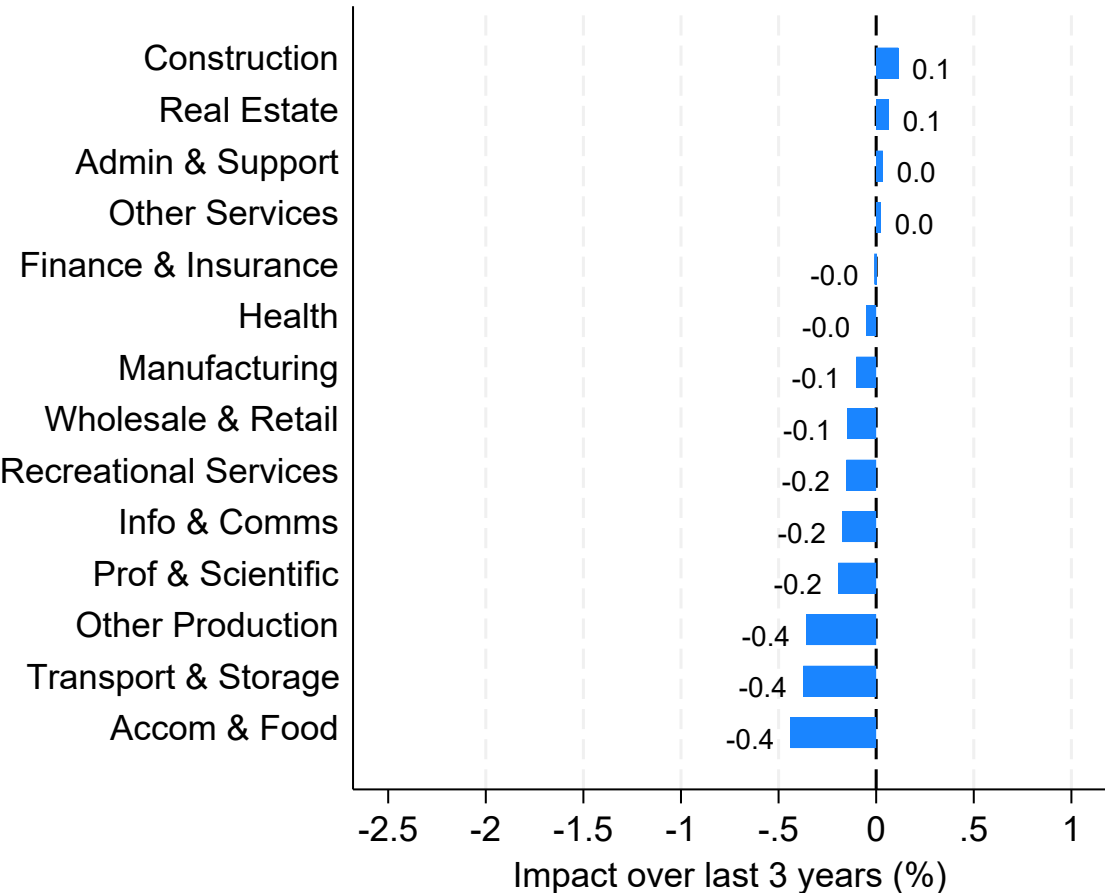
Figure A10 Frequency of AI use by survey respondent: Feb-March 2025 vs. Nov-25 to Jan-26 (UK Firms)



Notes: This figure is based on responses to the question: “On average, how frequently do you personally use artificial intelligence technologies in a typical working week?” The results are based on responses from the UK Decision Maker Panel, collected over February-March 2025 and November 2025 – January 2026.

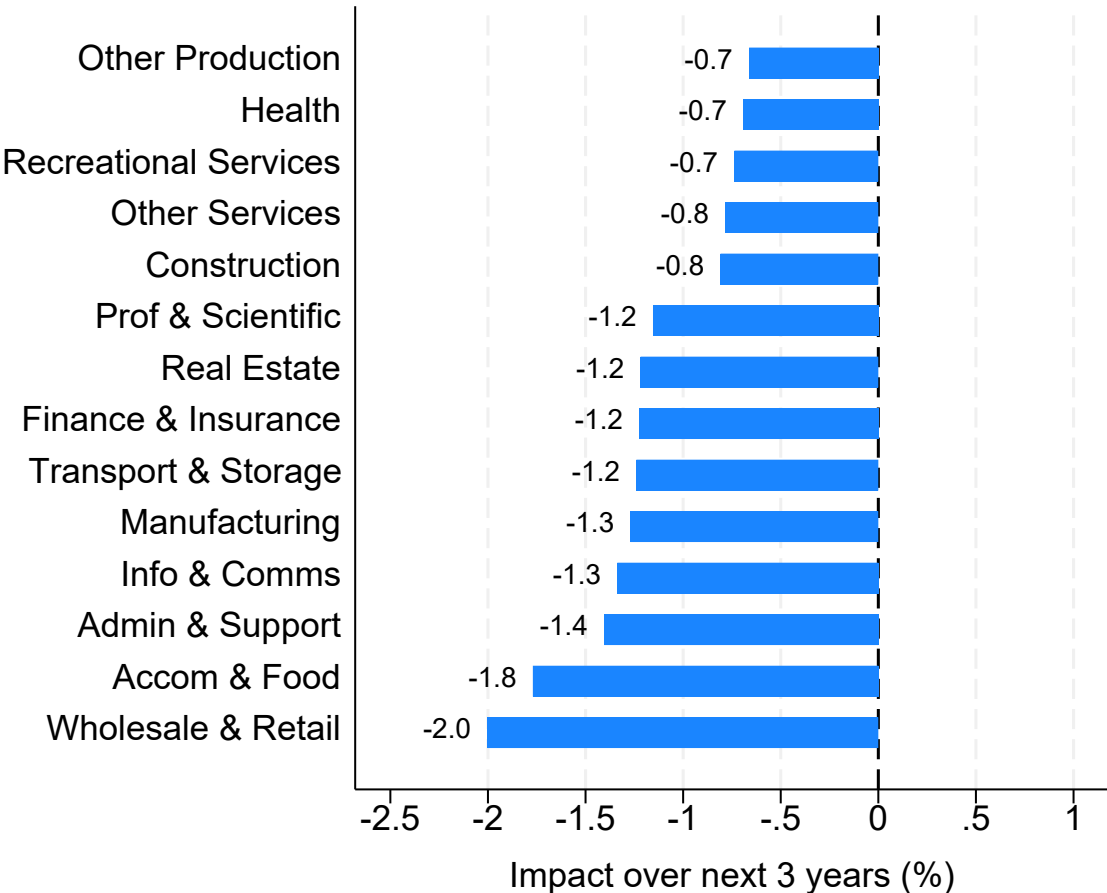
Figure A11 Realised and expected impacts of AI on employment by industry (UK Firms)

Panel A Past 3 Years



Source: Decision Maker Panel

Panel B Next 3 Years

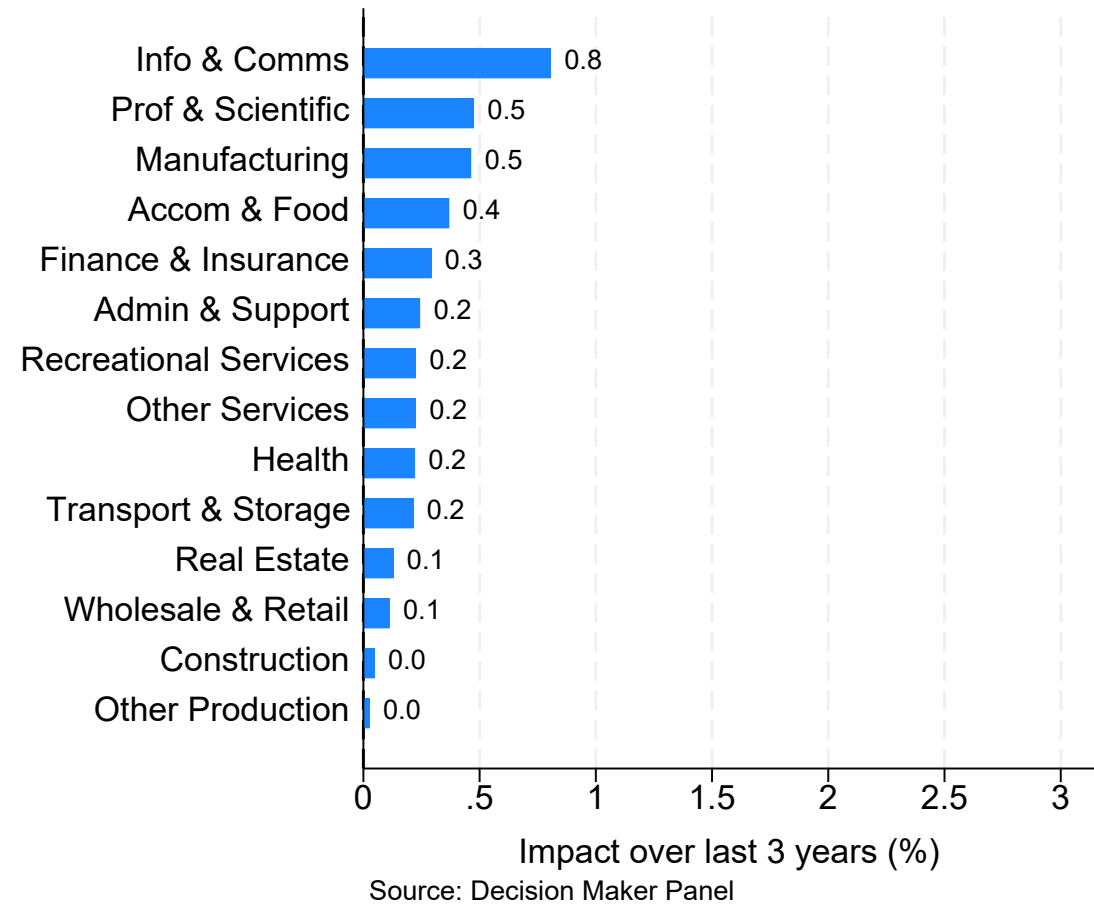


Source: Decision Maker Panel

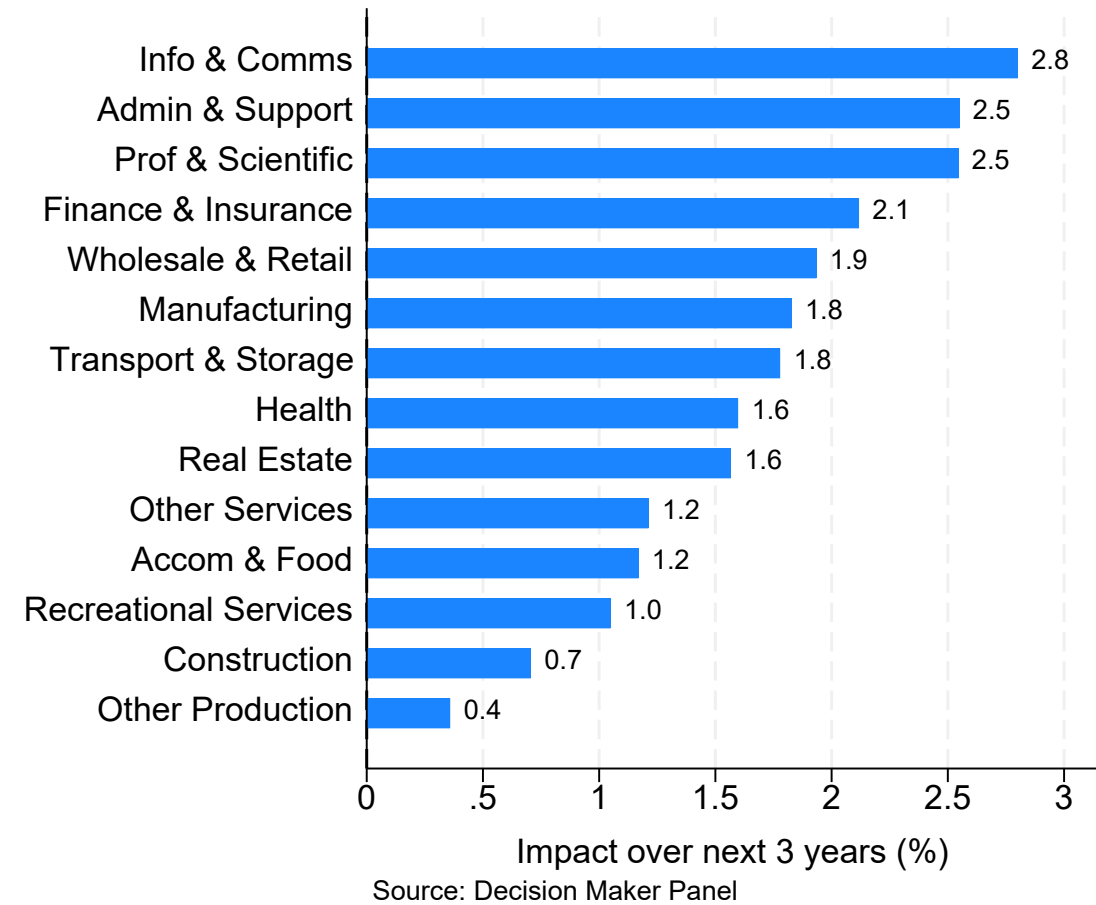
Notes: The results are based on responses from the UK Decision Maker Panel, collected over November 2025 – January 2026. The results are employment-weighted.

Figure A12 Realised and expected impacts of AI on productivity by industry (UK Firms)

Panel A Past 3 Years



Panel B Next 3 Years



Notes: The results are based on responses from the UK Decision Maker Panel, collected over November 2025 – January 2026. The results are employment-weighted.

Table A1 Number of AI technologies currently used (UK Firms)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Dependent Variable:	Number of AI Technologies Currently Used												
Labor productivity (logs)	0.23*** (0.04)											0.14** (0.06)	0.14** (0.06)
Employment (logs)		0.10*** (0.02)										0.18*** (0.02)	0.17*** (0.02)
Average Wage per Employee (logs)			0.44*** (0.06)									0.17** (0.09)	0.19** (0.09)
Firm Age				-0.01*** (0.00)								0.00 (0.00)	0.00 (0.00)
Average Age of Directors					-0.02*** (0.00)							-0.02*** (0.00)	-0.02*** (0.00)
Average productivity growth (2025)						0.01 (0.00)						0.01* (0.00)	
Expected productivity growth (2025)							0.02*** (0.01)					0.01* (0.01)	
Average real sales growth (2025)								0.00 (0.00)					0.00 (0.00)
Expected real sales growth (2025)									0.01 (0.01)				-0.00 (0.01)
Average employment growth (2025)										-0.00 (0.00)			-0.01*** (0.00)
Expected employment growth (2025)											0.00 (0.01)		-0.00 (0.01)
Mean of Dependent Variable	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
SIC2 industry and time fixed effects	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes

Notes: The dependent variable is the number of AI technologies currently being by firms. The data from the UK Decision Maker Panel was collected over February-April 2025 and November 2025 – January 2026, with the latest firm observation used in the regressions (N=2,793). A constant has also been estimated, but not reported in the table. Where data are missing for a particular variable a dummy variable is included to account for that (results not reported). Standard errors are clustered at the firm level, stars indicate *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table A2 Determinants of frequency of AI use by survey respondent (UK Firms)

Dependent Variable:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Average Weekly AI Use (hours)												
Labor productivity (logs)	0.07 (0.05)											-0.02 (0.08)	-0.01 (0.08)
Employment (logs)		-0.10*** (0.02)										0.01 (0.03)	0.01 (0.03)
Average Wage per Employee (logs)			0.22*** (0.07)									0.18 (0.12)	0.19 (0.12)
Firm Age				-0.02*** (0.00)								0.00 (0.00)	0.00 (0.00)
Average Age of Directors					-0.04*** (0.01)							-0.03*** (0.01)	-0.03*** (0.01)
Average productivity growth (2025)						0.00 (0.00)						0.00 (0.00)	
Expected productivity growth (2025)							0.02** (0.01)					0.02* (0.01)	
Average real sales growth (2025)								-0.00 (0.00)					-0.00 (0.00)
Expected real sales growth (2025)									0.02** (0.01)				0.01 (0.01)
Average employment growth (2025)										-0.01 (0.00)			-0.01 (0.00)
Expected employment growth (2025)											0.01 (0.01)		-0.01 (0.01)
Mean of Dependent Variable	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
SIC2 industry and time fixed effects	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes

Notes: The data from the UK Decision Maker Panel was collected over February-March 2025 and November 2025 – January 2026, with the latest firm observation used in the regressions (N=2,642). A constant has also been estimated, but not reported in the table. Where data are missing for a particular variable a dummy variable is included to account for that (results not reported). Standard errors are clustered at the firm level, stars indicate *** p<0.01, ** p<0.05, * p<0.1.

Figure B1 Screenshots of AI survey questions in SBU



On average, how frequently do you **personally use** A.I. technologies in a typical working week?

- *Note: Among other things, A.I. technologies could include text generation using large language models (e.g. Microsoft Copilot), data or image processing using machine learning, and visual content creation.*

☐ More than 5 hours a week

☐ 1 to 5 hours a week

☐ Up to 1 hour a week

☐ Not at all



Which of the following artificial intelligence (A.I.) technologies, if any, does your firm **currently use**?

And which do you expect to make use of over the **next three years**?

- *Select all that apply*

	Currently using	Expect to use in the next 3 years
Autonomous vehicles	<input type="checkbox"/>	<input type="checkbox"/>
Robotics	<input type="checkbox"/>	<input type="checkbox"/>
Visual content creation	<input type="checkbox"/>	<input type="checkbox"/>
Image processing using machine learning	<input type="checkbox"/>	<input type="checkbox"/>
Data processing using machine learning	<input type="checkbox"/>	<input type="checkbox"/>
Text generation using Large Language Models	<input type="checkbox"/>	<input type="checkbox"/>
Other A.I. technology	<input type="checkbox"/>	<input type="checkbox"/>
We are not using/do not expect to use any A.I. technologies	<input type="checkbox"/>	<input type="checkbox"/>

Figure B1 Screenshots of AI survey questions in SBU (continued)



How has the adoption of A.I. technologies affected the volume of SALES PER EMPLOYEE of your business over the **past three years**?

And how do you expect this to affect your volume of SALES PER EMPLOYEE over the **next three years**?

	Past 3 years	Next 3 years
A large negative influence, subtracting 5% or more	<input type="radio"/>	<input type="radio"/>
A minor negative influence, subtracting less than 5%	<input type="radio"/>	<input type="radio"/>
No material impact	<input type="radio"/>	<input type="radio"/>
A minor positive influence, adding less than 5%	<input type="radio"/>	<input type="radio"/>
A large positive influence, adding 5% or more	<input type="radio"/>	<input type="radio"/>



How has the adoption of A.I. technologies affected the NUMBER OF EMPLOYEES of your business over the **past three years**?

And how do you expect this to affect your NUMBER OF EMPLOYEES over the **next three years**?

	Past 3 years	Next 3 years
A large negative influence, subtracting 5% or more	<input type="radio"/>	<input type="radio"/>
A minor negative influence, subtracting less than 5%	<input type="radio"/>	<input type="radio"/>
No material impact	<input type="radio"/>	<input type="radio"/>
A minor positive influence, adding less than 5%	<input type="radio"/>	<input type="radio"/>
A large positive influence, adding 5% or more	<input type="radio"/>	<input type="radio"/>

Figure B2 Screenshots of AI survey questions in DMP

Decision Maker Panel



Which of the following artificial intelligence technologies, if any, does your business currently use? And which do you expect to make use of over the next three years?

Please select all that apply.

	Currently using	Expect to use in next 3 years
Autonomous vehicles	<input type="checkbox"/>	<input type="checkbox"/>
Data processing using machine learning	<input type="checkbox"/>	<input type="checkbox"/>
Image processing using machine learning	<input type="checkbox"/>	<input type="checkbox"/>
Robotics	<input type="checkbox"/>	<input type="checkbox"/>
Text generation using Large Language Models	<input type="checkbox"/>	<input type="checkbox"/>
Visual content creation	<input type="checkbox"/>	<input type="checkbox"/>
Other AI technology	<input type="checkbox"/>	<input type="checkbox"/>
Don't know	<input type="checkbox"/>	<input type="checkbox"/>
Not using/Do not expect to use any artificial intelligence technologies	<input type="checkbox"/>	<input type="checkbox"/>

Decision Maker Panel



On average, how frequently do you personally use artificial intelligence technologies in a typical working week?

Note: Amongst other things, AI technologies could include text generation using large language models (eg Microsoft Copilot), data or image processing using machine learning and visual content creation.

Not at all

Up to 1 hour a week

1 to 5 hours a week

More than 5 hours a week

Figure B2 Screenshots of AI survey questions in DMP (continued)

Decision Maker Panel



BANK OF ENGLAND

How has the adoption of artificial intelligence technologies affected the volume of SALES PER EMPLOYEE in your business over the past three years? And how do you expect this to affect your volume of SALES PER EMPLOYEE over the next three years?

Past 3 years

Next 3 years

A large positive influence, adding 5% or more

☐☐

A minor positive influence, adding less than 5%

☐☐

No material impact

☐☐

A minor negative influence, subtracting less than 5%

☐☐

A large negative influence, subtracting 5% or more

☐☐

Decision Maker Panel



BANK OF ENGLAND

How has the adoption of artificial intelligence technologies affected the NUMBER OF EMPLOYEES in your business over the past three years? And how do you expect this to affect your NUMBER OF EMPLOYEES over the next three years?

Past 3 years

Next 3 years

A large positive influence, adding 5% or more

☐☐

A minor positive influence, adding less than 5%

☐☐

No material impact

☐☐

A minor negative influence, subtracting less than 5%

☐☐

A large negative influence, subtracting 5% or more

☐☐

Figure B3 Screenshots of AI survey questions in BOP-F

forsa.

Welche der folgenden KI-Technologien werden **derzeit** in Ihrem Unternehmen genutzt? Und welche erwarten Sie in den **nächsten drei Jahren** zu nutzen?

Hinweis: Bitte wählen Sie alle zutreffenden Antworten aus.

	derzeit:	in den nächsten drei Jahren:
Textgenerierung mit großen Sprachmodellen (eng. Large Language Models)	<input type="checkbox"/>	<input type="checkbox"/>
autonome Fahrzeuge	<input type="checkbox"/>	<input type="checkbox"/>
Erstellung visueller Inhalte	<input type="checkbox"/>	<input type="checkbox"/>
Robotik	<input type="checkbox"/>	<input type="checkbox"/>
Datenverarbeitung mittels maschinellem Lernen	<input type="checkbox"/>	<input type="checkbox"/>
Bildverarbeitung mittels maschinellem Lernen	<input type="checkbox"/>	<input type="checkbox"/>
andere KI-Technologien	<input type="checkbox"/>	<input type="checkbox"/>
Wir nutzen derzeit keine / erwarten keine Nutzung von KI-Technologien.	<input type="checkbox"/>	<input type="checkbox"/>

Zurück

Weiter

Figure B3 Screenshots of AI survey questions in BOP-F (continued)

forsa.

Wie häufig nutzen Sie selbst künstliche Intelligenz (KI) ⓘ in einer typischen Arbeitswoche im Durchschnitt?

- ☐ gar nicht
- ☐ bis zu 1 Stunde pro Woche
- ☐ 1 bis 5 Stunden pro Woche
- ☐ mehr als 5 Stunden pro Woche

Zurück

Weiter

Figure B3 Screenshots of AI survey questions in BOP-F (continued)

forsa.

Wie hat die Einführung von KI-Technologien die Anzahl der Beschäftigten in Ihrem Unternehmen in den **letzten drei Jahren** beeinflusst?
Und was erwarten Sie, wie wird die Anzahl der Beschäftigten in Ihrem Unternehmen in den **nächsten drei Jahren** dadurch beeinflusst?

	in den letzten drei Jahren:	in den nächsten drei Jahren:
großer positiver Einfluss, Anstieg um 5 % oder mehr	<input type="radio"/>	<input type="radio"/>
positiver Einfluss, Anstieg um bis zu 5 %	<input type="radio"/>	<input type="radio"/>
keine wesentliche Auswirkung	<input type="radio"/>	<input type="radio"/>
negativer Einfluss, Rückgang um bis zu 5 %	<input type="radio"/>	<input type="radio"/>
großer negativer Einfluss, Rückgang um 5 % oder mehr	<input type="radio"/>	<input type="radio"/>

Weiter

Figure B3 Screenshots of AI survey questions in BOP-F (continued)


forsa.

Wie hat die Einführung von KI-Technologien den Umsatz pro Beschäftigten in Ihrem Unternehmen in den **letzten drei Jahren** beeinflusst?
Und was erwarten Sie, wie wird der Umsatz pro Beschäftigten in Ihrem Unternehmen in den **nächsten drei Jahren** dadurch beeinflusst?

	in den letzten drei Jahren:	in den nächsten drei Jahren:
großer positiver Einfluss, Anstieg um 5 % oder mehr	<input type="radio"/>	<input type="radio"/>
positiver Einfluss, Anstieg um bis zu 5 %	<input type="radio"/>	<input type="radio"/>
keine wesentliche Auswirkung	<input type="radio"/>	<input type="radio"/>
negativer Einfluss, Rückgang um bis zu 5 %	<input type="radio"/>	<input type="radio"/>
großer negativer Einfluss, Rückgang um 5 % oder mehr	<input type="radio"/>	<input type="radio"/>

Weiter

Figure B4 Screenshots of AI survey questions in BOSS



○○○○○●○○

Which of the following artificial intelligence (A.I.) technologies, if any, does your business currently use?

And which do you expect to make use of over the next three years?


Please select all that apply for each column

	Currently using	Expect to use in next 3 years
Visual content creation	<input type="checkbox"/>	<input type="checkbox"/>
Data processing using machine learning	<input type="checkbox"/>	<input type="checkbox"/>
Text generation using Large Language Models	<input type="checkbox"/>	<input type="checkbox"/>
Image processing using machine learning	<input type="checkbox"/>	<input type="checkbox"/>
Robotics	<input type="checkbox"/>	<input type="checkbox"/>
Autonomous vehicles	<input type="checkbox"/>	<input type="checkbox"/>
Other A.I. technology	<input type="checkbox"/>	<input type="checkbox"/>
We are not using/do not expect to use any A.I. technologies	<input checked="" type="radio"/>	<input checked="" type="radio"/>

[Email](#) | [Privacy](#)

BackNext

Figure B4 Screenshots of AI survey questions in BOSS (continued)

 **MACQUARIE**
University

Progress indicator: 25 filled circles, 5 empty circles

On average, how frequently do you **personally use** artificial intelligence technologies in a **typical working week**?

Note: Amongst other things, AI technologies could include text generation using large language models (eg Microsoft Copilot or ChatGPT), data or image processing using machine learning and visual content creation.

Not at all

Up to 1 hour a week

1 to 5 hours a week

More than 5 hours a week

[|Email|](#) [|Privacy|](#)


Back

Next

Figure B4 Screenshots of AI survey questions in BOSS (continued)

[illegible]

Figure B4 Screenshots of AI survey questions in BOSS (continued)



○○○●○○

How has the adoption of A.I. technologies affected the NUMBER OF EMPLOYEES in your business over the past three years?

And how do you expect this to affect your NUMBER OF EMPLOYEES over the next three years?

	Past 3 years	Next 3 years
A large positive influence, adding 5% or more	<input type="radio"/>	<input type="radio"/>
A minor positive influence, adding less than 5%	<input type="radio"/>	<input type="radio"/>
No material impact	<input type="radio"/>	<input type="radio"/>
A minor negative influence, subtracting less than 5%	<input type="radio"/>	<input type="radio"/>
A large negative influence, subtracting 5% or more	<input type="radio"/>	<input type="radio"/>

[Back](#) [Next](#)

Email | Privacy

Figure B5 Screenshots of AI survey questions in SWAA

We will now ask about YOUR experiences with Generative AI.

Generative AI is a type of artificial intelligence that creates text, images, audio, or video in response to prompts. Some examples of Generative AI include ***ChatGPT***, ***Gemini***, and ***Midjourney***

Had you heard about Generative AI before this survey?

☐ No

☐ Yes

Continue

Do you use Generative AI for your job?

☐ No

☐ Yes

Continue

Figure B5 Screenshots of AI survey questions in SWAA (continued)

You indicated that you sometimes use Generative AI for your job.

Did you use Generative AI for your job LAST WEEK?

☐ No, I did not use Generative AI for my job last week

☐ Yes, one workday last week

☐ Yes, more than one workday last week

☐ Yes, every workday last week

Continue

Please think back to the days LAST WEEK on which you used Generative AI for your job.

On average, how much time did you spend actively using Generative AI for your job?

☐ Less than 15 minutes per day

☐ Between 15 minutes and 1 hour per day

☐ Between 1 and 4 hours per day

☐ More than 4 hours per day

Continue

Figure B5 Screenshots of AI survey questions in SWAA (continued)

How has the adoption of Artificial Intelligence technologies affected your employer's SALES PER WORKER (PRODUCTIVITY):

- over the past three years?
- over the next three years?

	Past 3 years	Next 3 years
A large positive influence, adding 5% or more	<input type="radio"/>	<input type="radio"/>
A minor positive influence, adding less than 5%	<input type="radio"/>	<input type="radio"/>
No material impact	<input type="radio"/>	<input type="radio"/>
A minor negative influence, subtracting less than 5%	<input type="radio"/>	<input type="radio"/>
A large negative influence, subtracting 5% or more	<input type="radio"/>	<input type="radio"/>

Continue

How has the adoption of Artificial Intelligence technologies affected the NUMBER OF EMPLOYEES who work for your employer:

- over the past three years?
- over the next three years?

	Past 3 years	Next 3 years
A large positive influence, adding 5% or more	<input type="radio"/>	<input type="radio"/>
A minor positive influence, adding less than 5%	<input type="radio"/>	<input type="radio"/>
No material impact	<input type="radio"/>	<input type="radio"/>
A minor negative influence, subtracting less than 5%	<input type="radio"/>	<input type="radio"/>
A large negative influence, subtracting 5% or more	<input type="radio"/>	<input type="radio"/>

Continue

Figure B6 Executives are Recruited by Phone and Then Moved to an Online Panel



Random sampling from population of firms with 10+ employees (median ≈ 100)

