Work from Home and AI Trends

Nick Bloom, December 12th 2025, SF Fed

Summary:

WFH stabilized at about 25% of days in the US, a 3x jump vs 2019. Firms typically have hybrid WFH for graduates, and fully in-person for non-graduates

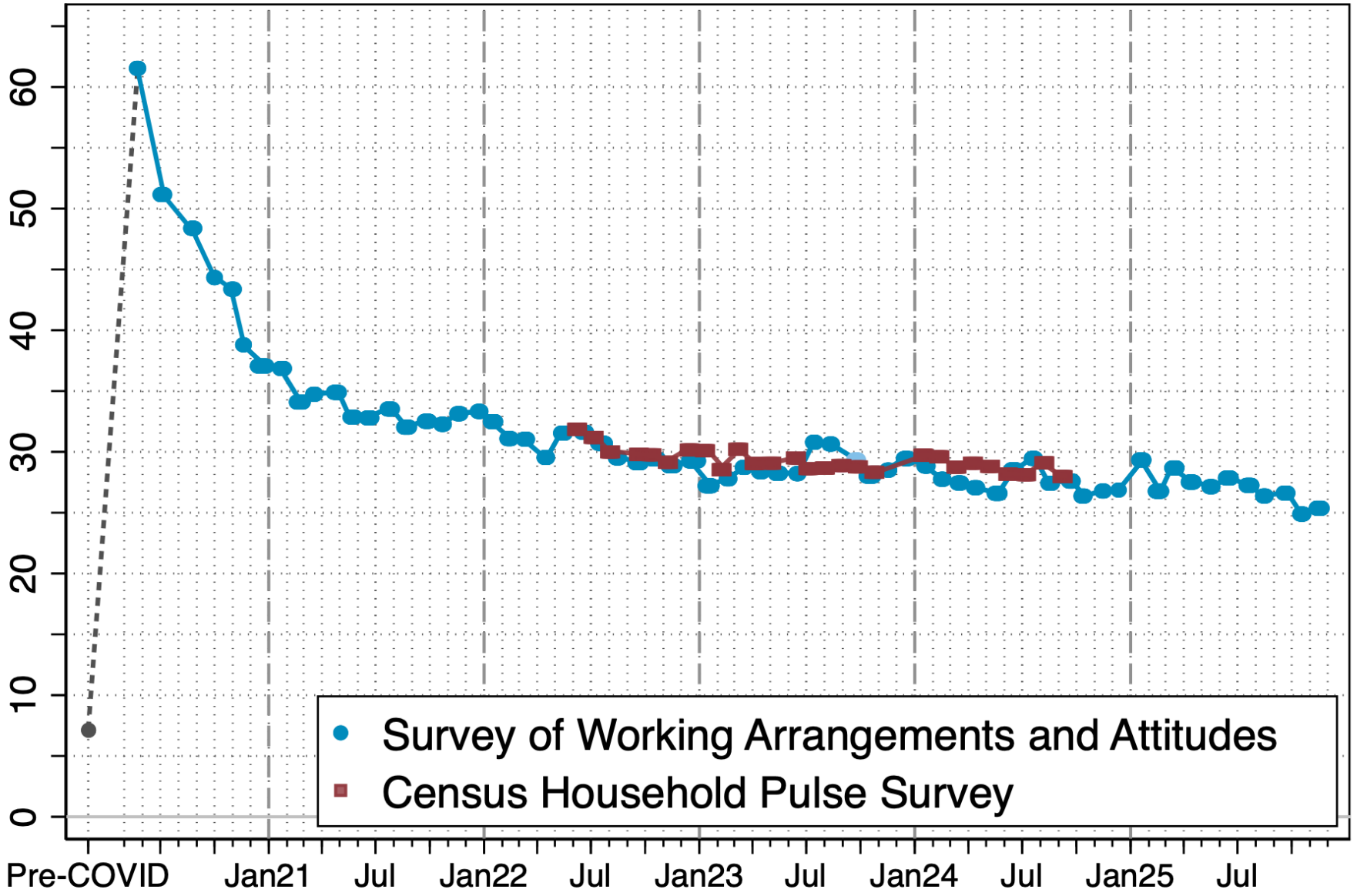
AI is use rising fast. But so far firms report little impact, but predict large negative employment and positive productivity impacts in the next 3 years.

>>>> Working from home

>>>> AI Use

Monthly Data: WFH is stabilizing at about 25% of days

US full days worked from home, %

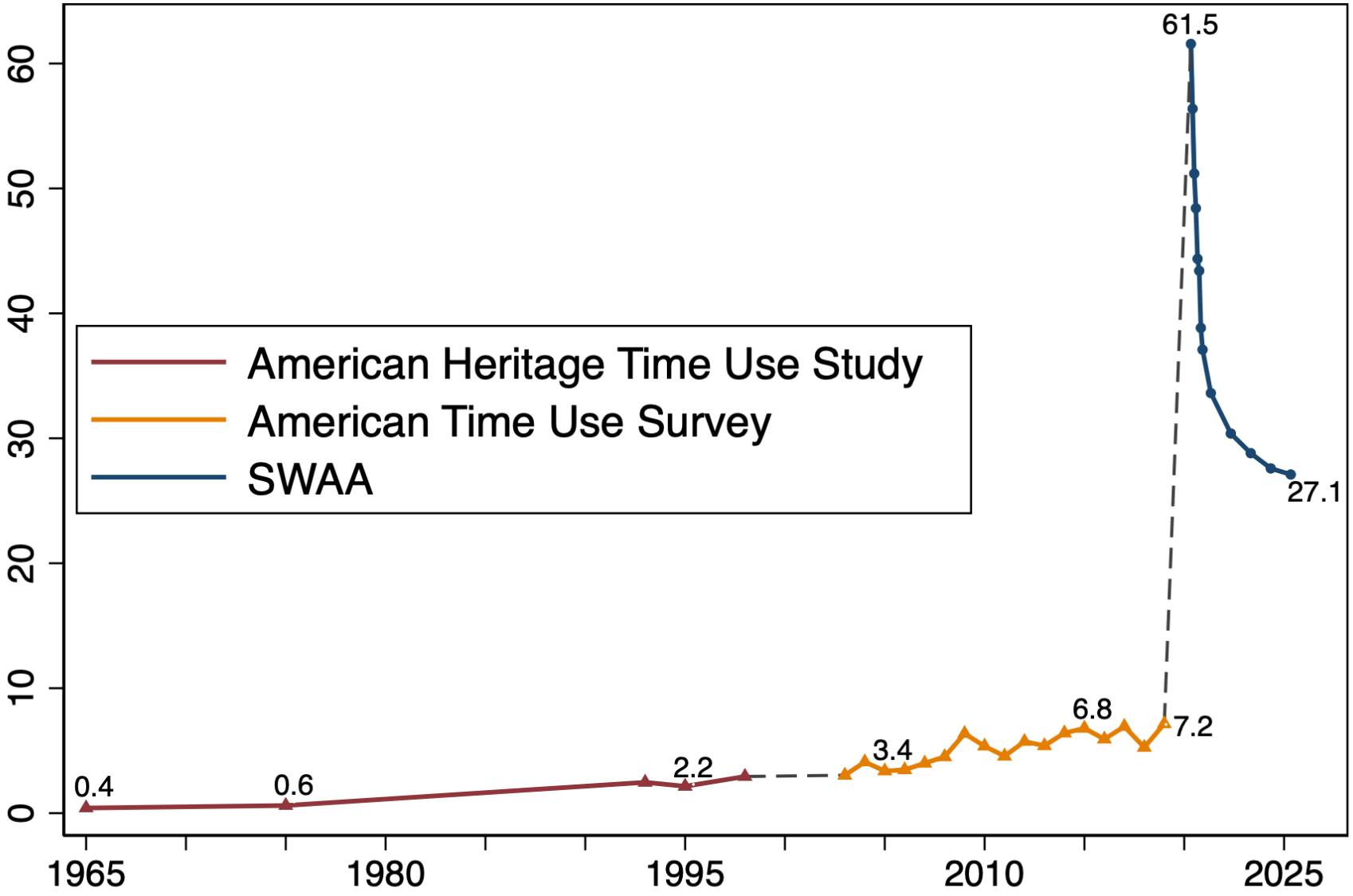


Source: 266,830 (SWAA) N = 923,587 (HHP). SWAA data from survey responses weighted to match the US population. Pre-covid data from the American Time Use Survey. CHPS respondents weighted to match the US population aged 20 to 64 in households with incomes above $25,000.

Survey of Workplace Attitudes and Arrangements (Barrero, Bloom and Davis 2025) https://wfhresearch.com/

Annual Data: WFH settling to about 3x pre-COVID levels

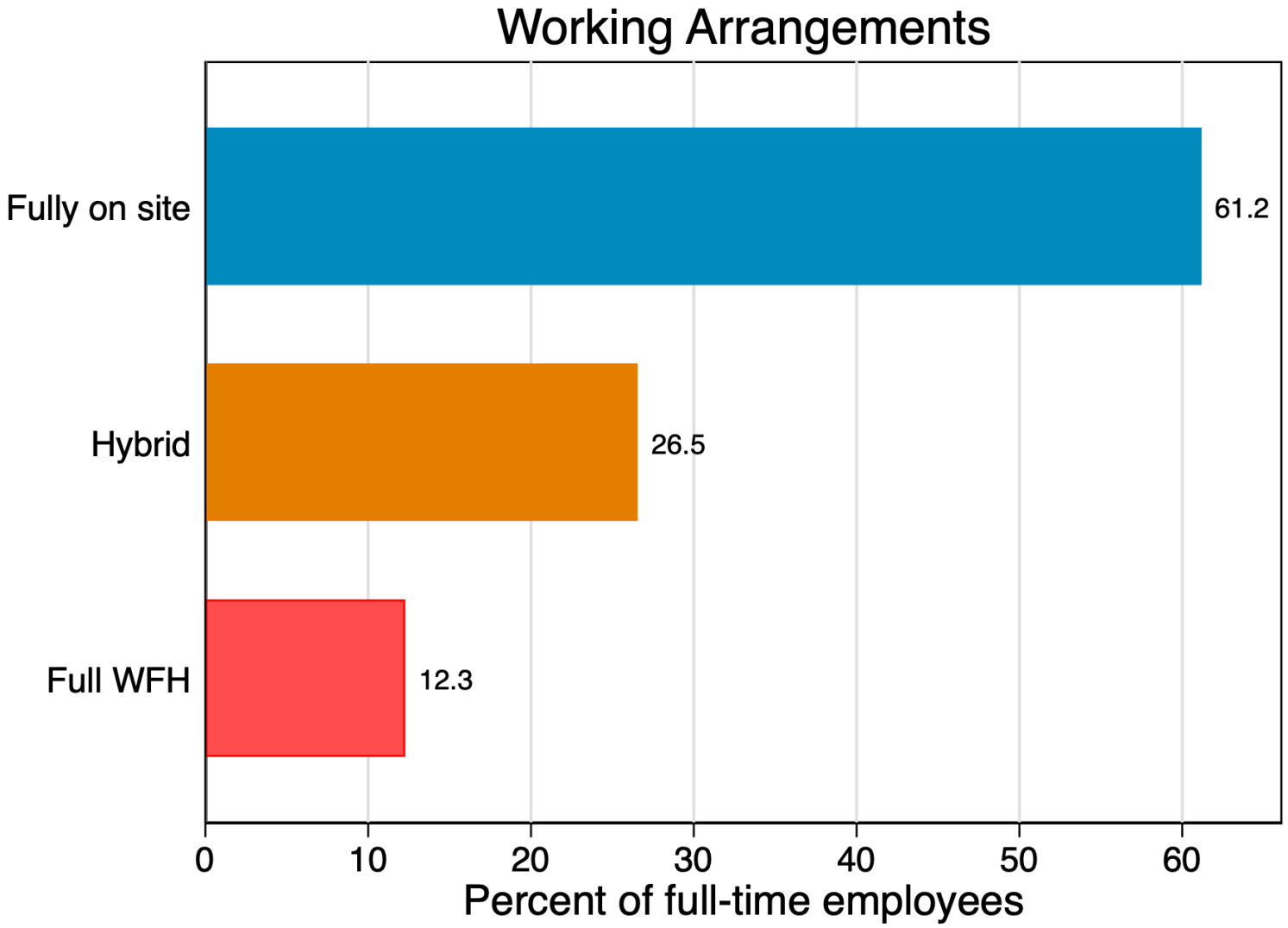
US full days worked from home, %



Source: For each dataset, we compute the percent of working individuals who worked full days at home during the survey's reference period. For the AHTUS and ACS, if an individual reports usually working from home, we mark them as working from home 100% of the time. In SWAA we compute the percent of full paid days at home to account for a hybrid work schedule and calculate monthly averages. We report those monthly values in 2020 and combine them into yearly averages from 2021 onwards. Then we plot each percentage on the vertical axis. We re-weight the sample of US residents aged 20 to 64 earning $20,000 or more in 2019 dollars to overall population shares. We impute the September 2023 data value as the average of August and October due to data quality issues.

Details in Barrero, Bloom and Davis (2025)
https://wfhresearch.com/

Important to note 60% of employees still do not WFH



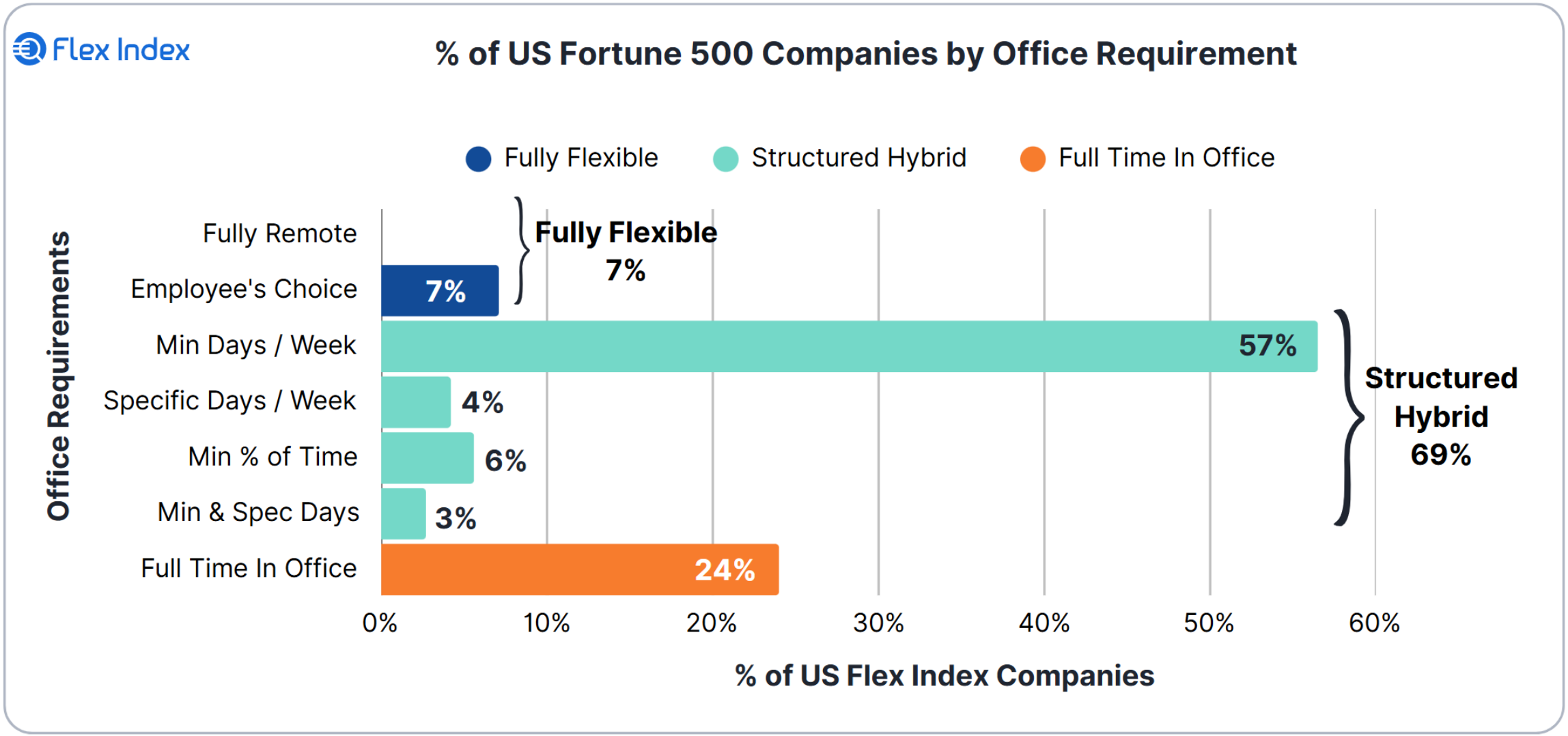
Source: Responses to the questions:

- *For each day* **last week**, *did you* **work a full day (6 or more hours)**, *and if so* **where?**

Notes: We compute the percent of full-time (i.e. work 5+ days/week) wage and salary employees who either i) worked all their days on business premises; ii) worked some days on busines premises and some days at home; or iiii) worked all all days at home during the survey's reference week. Then we show the percentage for each group. The sample covers the December 2024 to November 2025 waves of the SWAA. We re-weight the sample of US residents aged 20 to 64 earning $10,000 or more in a prior year to match CPS shares by age-sex-education-earnings cells.

N = 40,328

Most big companies have white collar workers on hybrid WFH



Source: Flex Index (flexindex.com) employer-provided policy data and publicly available data on company office requirements for companies with headquarters in the US, Fortune 500 companies. N = 409 companies.

Source: Flex Index May 2025 report https://www.flexindex.com/

Hybrid WFH is popular because it is profitable

Hybrid working from home improves retention without damaging performance

nature

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Check for updates

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Working from home has become standard for employees with a university degree. The most common scheme, which has been adopted by around 100 million employees in Europe and North America, is a hybrid schedule, in which individuals spend a mix of days at home and at work each week[1,2]. However, the effects of hybrid working on employees and firms have been debated, and some executives argue that it damages productivity, innovation and career development[3–5]. Here we ran a six-month randomized control trial investigating the effects of hybrid working from home on 1,612 employees in a Chinese technology company in 2021–2022. We found that hybrid working improved job satisfaction and reduced quit rates by one-third. The reduction in quit rates was significant for non-managers, female employees and those with long commutes. Null equivalence tests showed that hybrid working did not affect performance grades over the next two years of reviews. We found no evidence for a difference in promotions over the next two years overall, or for any major employee subgroup. Finally, null equivalence tests showed that hybrid working had no effect on the lines of code written by computer-engineer employees. We also found that the 395 managers in the experiment revised their surveyed views about the effect of hybrid working on productivity, from a perceived negative effect (−2.6% on average) before the experiment to a perceived positive one (+1.0%) after the experiment. These results indicate that a hybrid schedule with two days a week working from home does not damage performance.

Working from home (WFH) surged after the COVID-19 pandemic, with university-graduate employees typically WFH for one to two days a week during 2023 (refs. 2,6). Previous causal research on WFH has focused on employees who are fully remote, usually working on independent tasks in call-centre, data-entry and helpdesk roles. This literature has found that the effects of fully remote working on productivity are often negative, which has resulted in calls to curtail WFH[5–12]. However, there are two challenges when it comes to interpreting this literature. First, more than 70% of employees WFH globally are on a hybrid schedule. This group comprises more than 100 million individuals, with the most common working pattern being three days a week in the office and two days a week at home[2,8,9]. Second, most employees who are regularly WFH are university graduates in creative team jobs that are important in science, law, finance, information technology (IT) and other industries, rather than performing repetitive data-entry or call processing tasks[10,11].

This paper addresses the gap in previous studies in two key ways. First, it uses a randomized control trial to examine the causal effect of a hybrid schedule in which employees are allowed to WFH two days per week. Second, it focuses on university-graduate employees in software engineering, marketing, accounting and finance, whose activities are mainly creative team tasks.

Our study describes a randomized control trial from August 2021 to January 2022, which involved 1,612 graduate employees in the Airfare and IT divisions of a large Chinese travel technology multinational called Trip.com. Employees were randomized by even or odd birth-days into the option to WFH on Wednesday and Friday and come into the office on the other three days, or to come into the office on all five days.

We found that in the hybrid WFH ('treatment') group, attrition rates dropped by one-third ($mean_{control} = 7.20$, $mean_{treat} = 4.80$, $t(1610) = 2.02$, $P = 0.043$) and work satisfaction scores improved ($mean_{control} = 7.84$, $mean_{treat} = 8.19$, $t(1343) = 4.17$, $P < 0.001$). Employees reported that WFH saved on commuting time and costs and afforded them the flex-ibility to attend to occasional personal tasks during the day (and catch up in the evenings or weekends). These effects on reduced attrition were significant for non-managerial employees ($mean_{control} = 8.59$, $mean_{treat} = 5.33$, $t(1215) = 2.23$, $P = 0.026$), female employees ($mean_{control} = 9.19$, $mean_{treat} = 4.18$, $t(568) = 2.40$, $P = 0.017$) and those with long (above-median) commutes ($mean_{control} = 6.00$, $mean_{treat} = 2.89$, $t(609) = 1.87$, $P = 0.062$).

At the same time, we found no evidence of a significant effect on employees' performance reviews, on the basis of null equivalence tests, and no evidence of a difference in promotion rates over periods of up to two years ('Null results' section of the Methods). We did find significant differences in pre-experiment beliefs about the effects of WFH on productivity between non-managers and managers. Before

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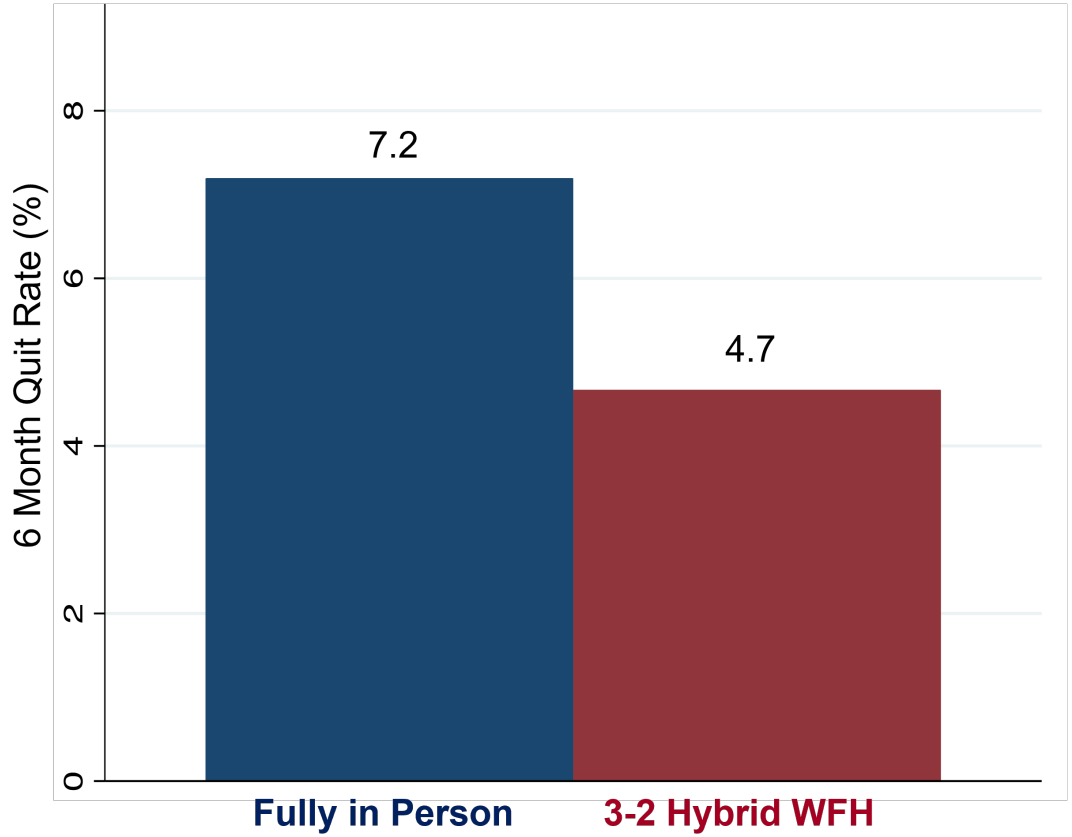
Hybrid WFH lowered employee quit rates by 35%



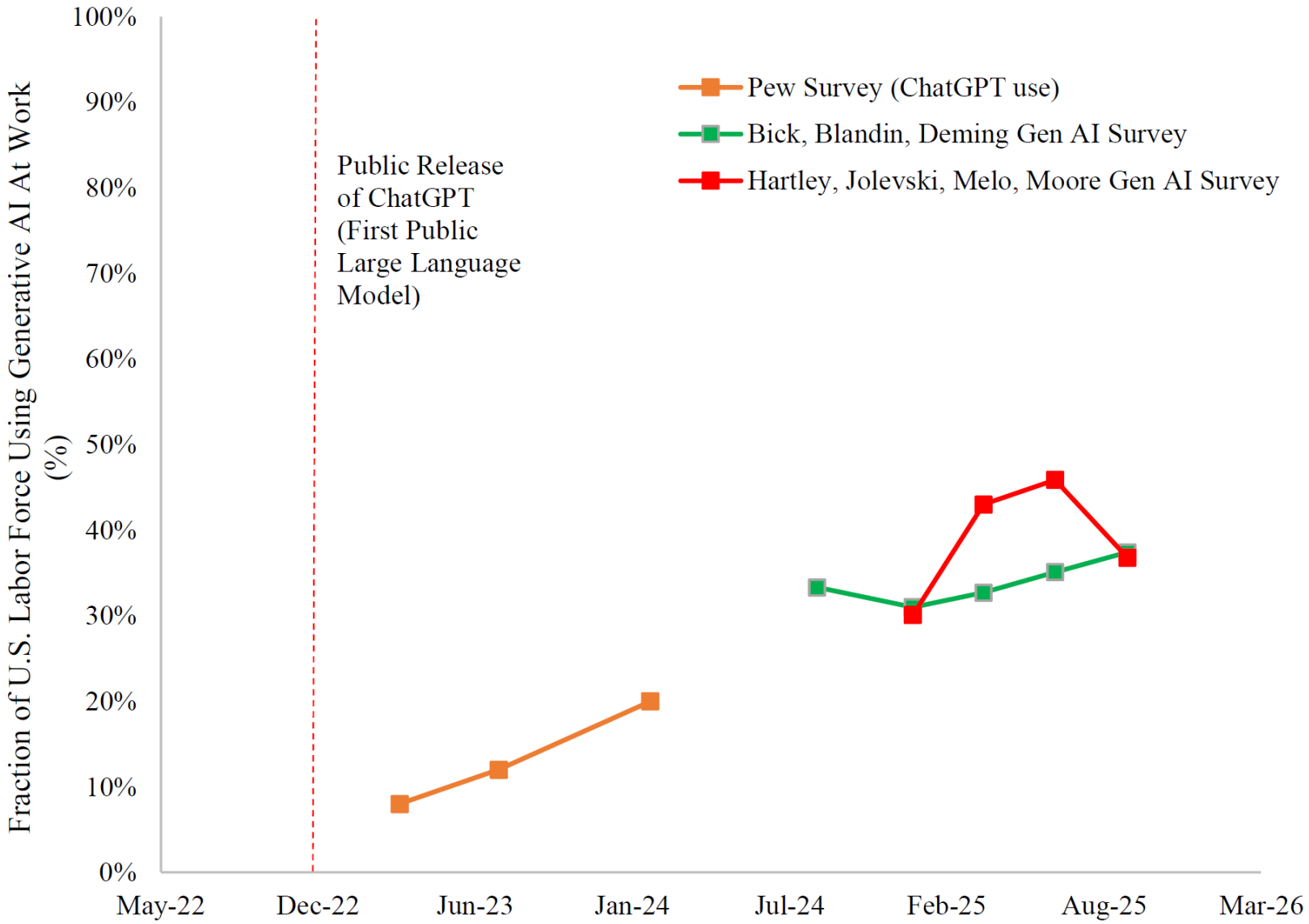
Source: Attrition rates for 1612 engineers, marketing and finance professionals of Trip.com who were randomized between September 2021 and February 2022 by even and odd birthdays into control (5-days a week in the office) and treatment (Mon, Tue and Thur in the office; Weds and Fri working from home). Difference statistically significant at the 5% level. Details in Bloom, Han and Liang (2022) "How Hybrid Work from Home Works Out".

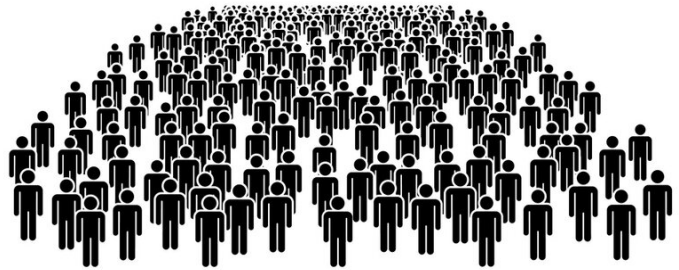
Source: https://www.nature.com/articles/s41586-024-07500-2

>>>> Working from home

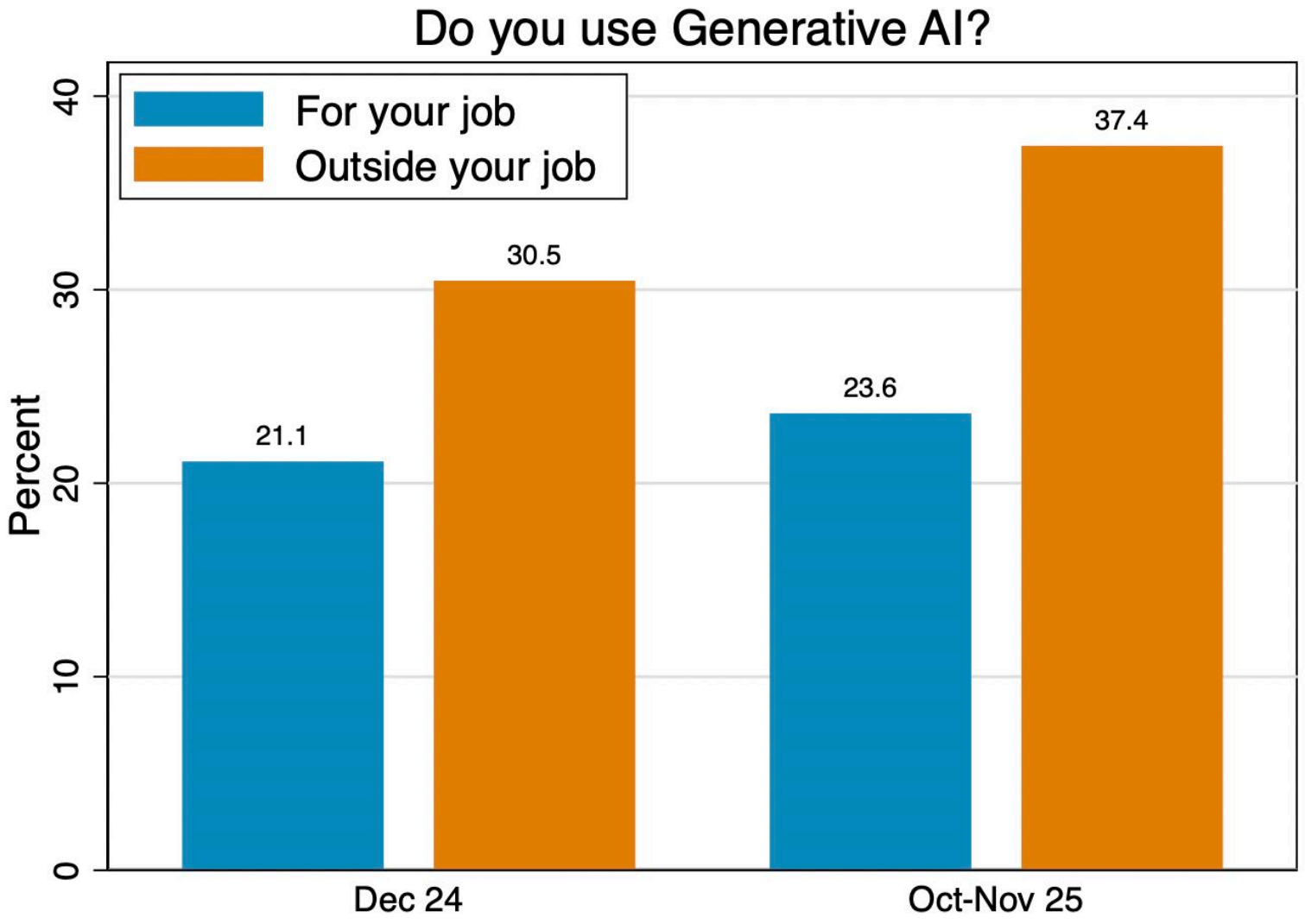
>>>> AI Use

Data on AI use by individuals shows rising adoption to almost 50%





This AI is used by individuals at work and even more at home



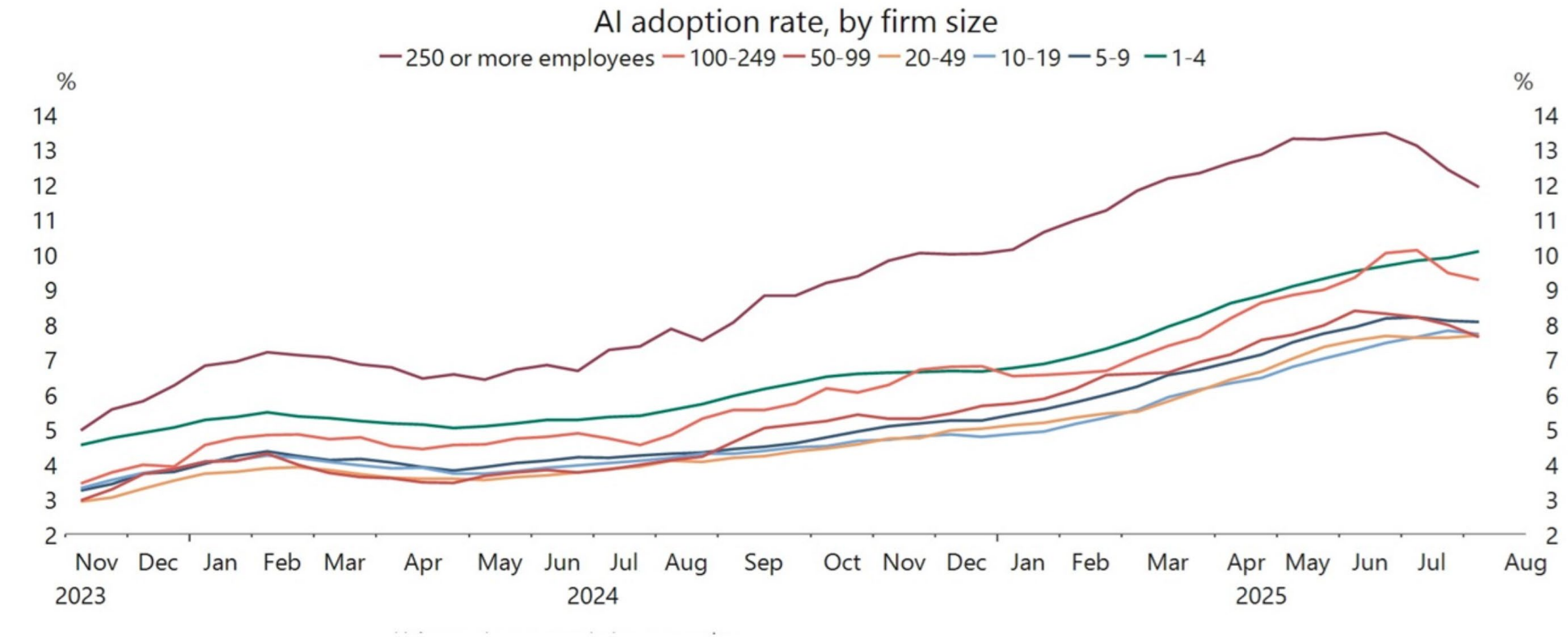
Responses to the Questions:

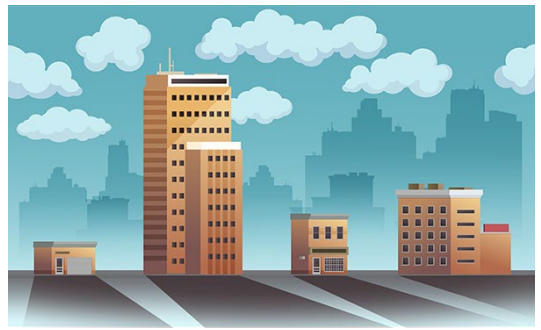
- *Had you heard about Generative AI before this survey?*
- *Do you use Generative AI for your job?*
- *Do you use Generative AI [outside your job?*

Notes: The sample includes all respondents aged 20 to 64 who answered the December 2024 or October 2025 SWAA waves, including individuals who did not earn at least $10,000 the prior year. We record a respondent as not using generative AI if they report not having heard of it prior to the survey. We reweight the raw survey responses to match the 2010-2019 Current Population Survey by age, sex, education, and earnings cells. Source Barrero, Bloom and Davis (2025) SWAA survey.

N = 14,347 (for your job)
N = 18,120 (outside your job)

Census data on AI use in firms – oddly low and now falling?





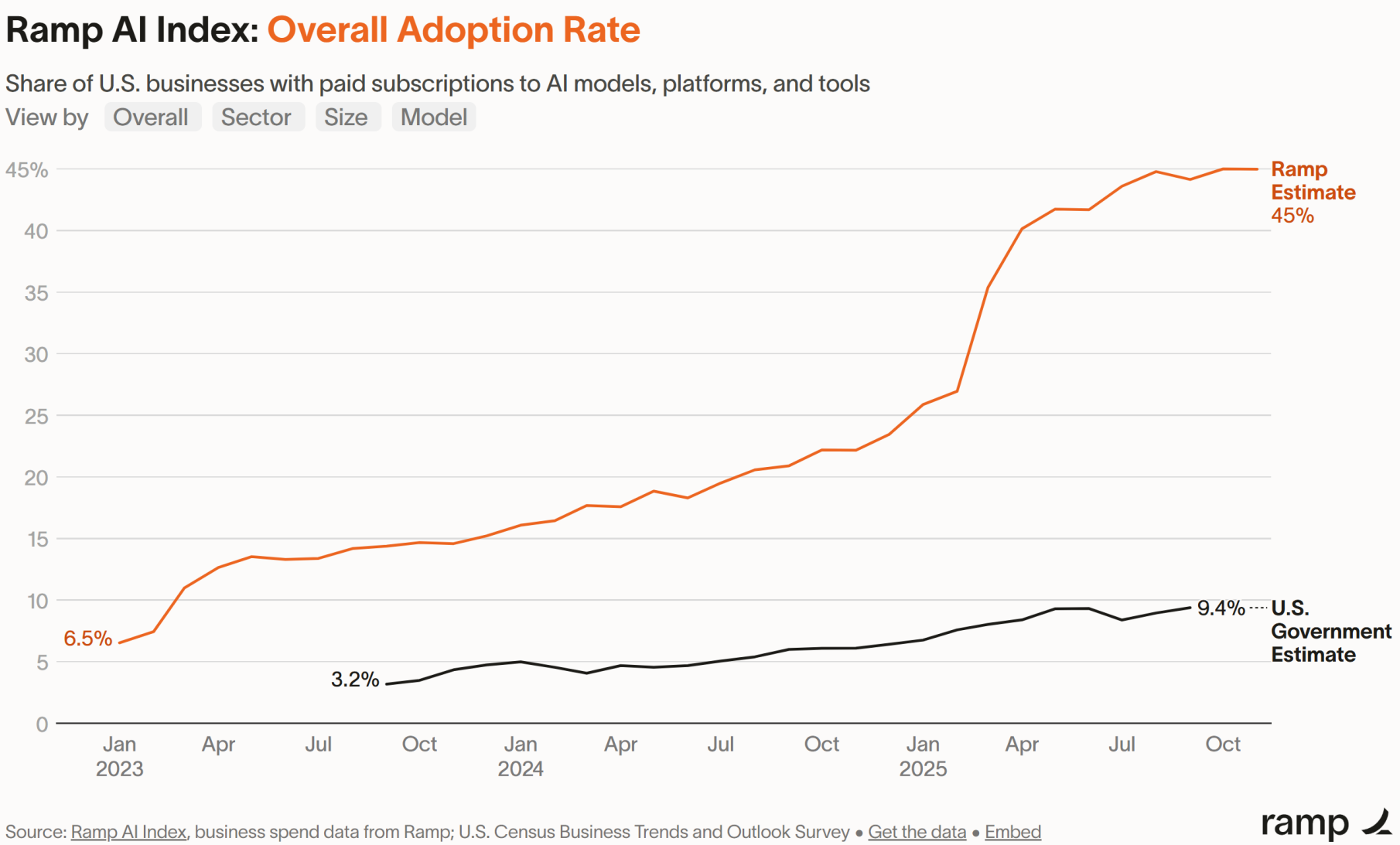
Source: Census BTOS survey

Two issues:

A) Who is responding – junior form fillers who know little about their firms AI use?

B) Question is designed in 2021 – so does not mention Generative AI

Ramp data on recurring AI payments by firms - higher and rising



Two issues:

A) Customers skews tech - biasing upwards

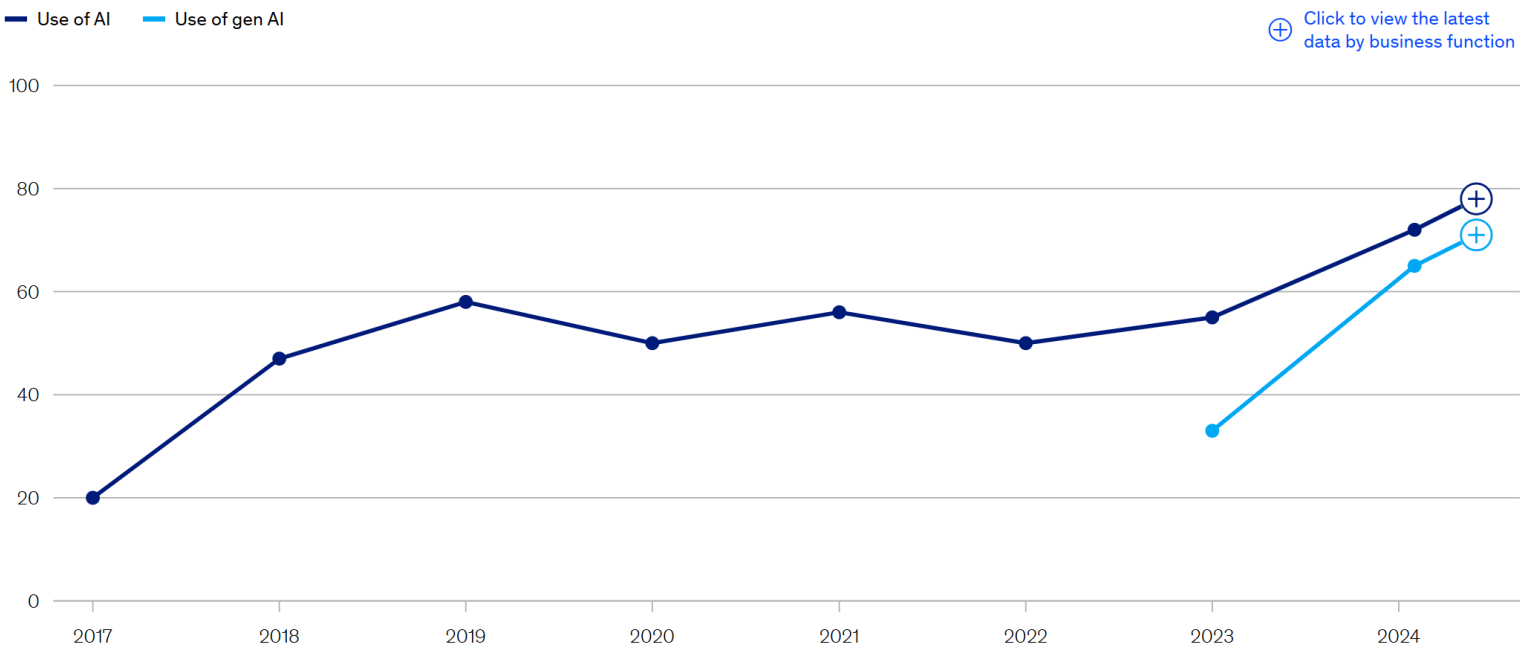
B) Narrow measure (subscriptions) – biasing downwards

Net impact of these two offsetting bias is unclear?

McKinsey data on AI use by firms – oddly high and flat?

Organizations' use of AI has accelerated markedly in the past year, after years of little meaningful change.

Organizations that use AI in at least 1 business function,[1] % of respondents



About the research

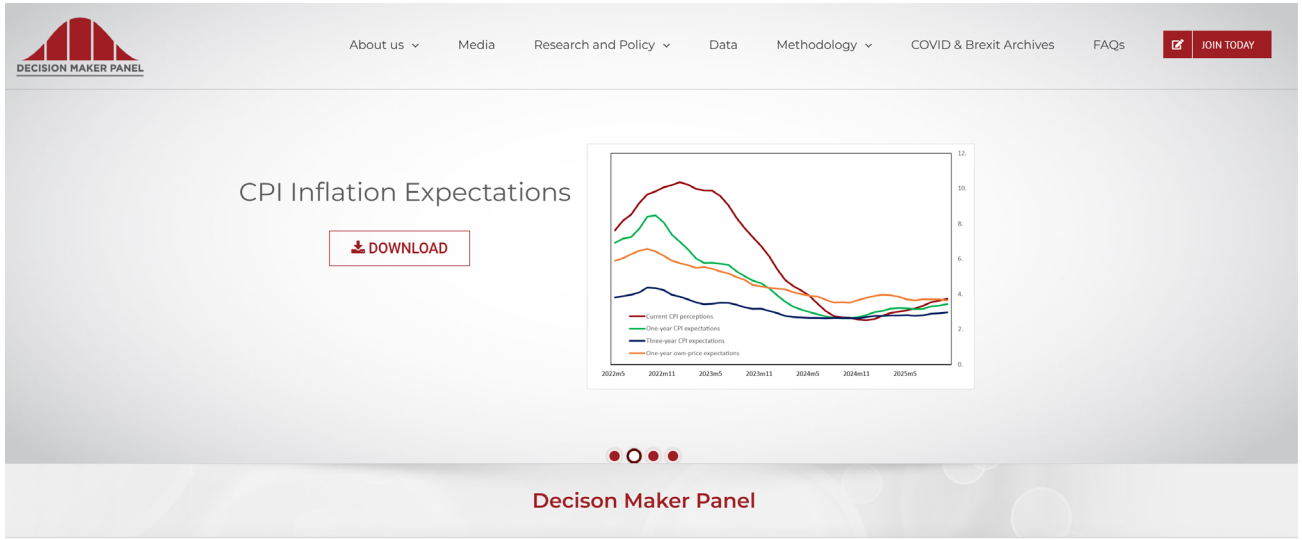
The online survey was in the field from June 25 to July 29, 2025, and garnered responses from 1,993 participants in 105 nations representing the full range of regions, industries, company sizes, functional specialties, and tenures. Thirty-eight percent of respondents say they work for organizations with more than $1 billion in annual revenues. To adjust for differences in response rates, the data are weighted by the contribution of each respondent's nation to global GDP.

Two issues:

A) Paid online survey – who is actually responding (are they even executives)?

B) Sample size - 1993 responses from 105 countries, so less than 20 observations per country which is very small?

Given the Lack of Reliable Data on AI Use in Firms Two Large Monthly Firm Surveys in the UK and US Added AI Use Questions



Next month's Decision Maker Panel data will be published Thursday 4th December 2025

DECISION MAKER PANEL

LATEST DATA – OCTOBER 2025

SIGN UP FOR NOTIFICATIONS

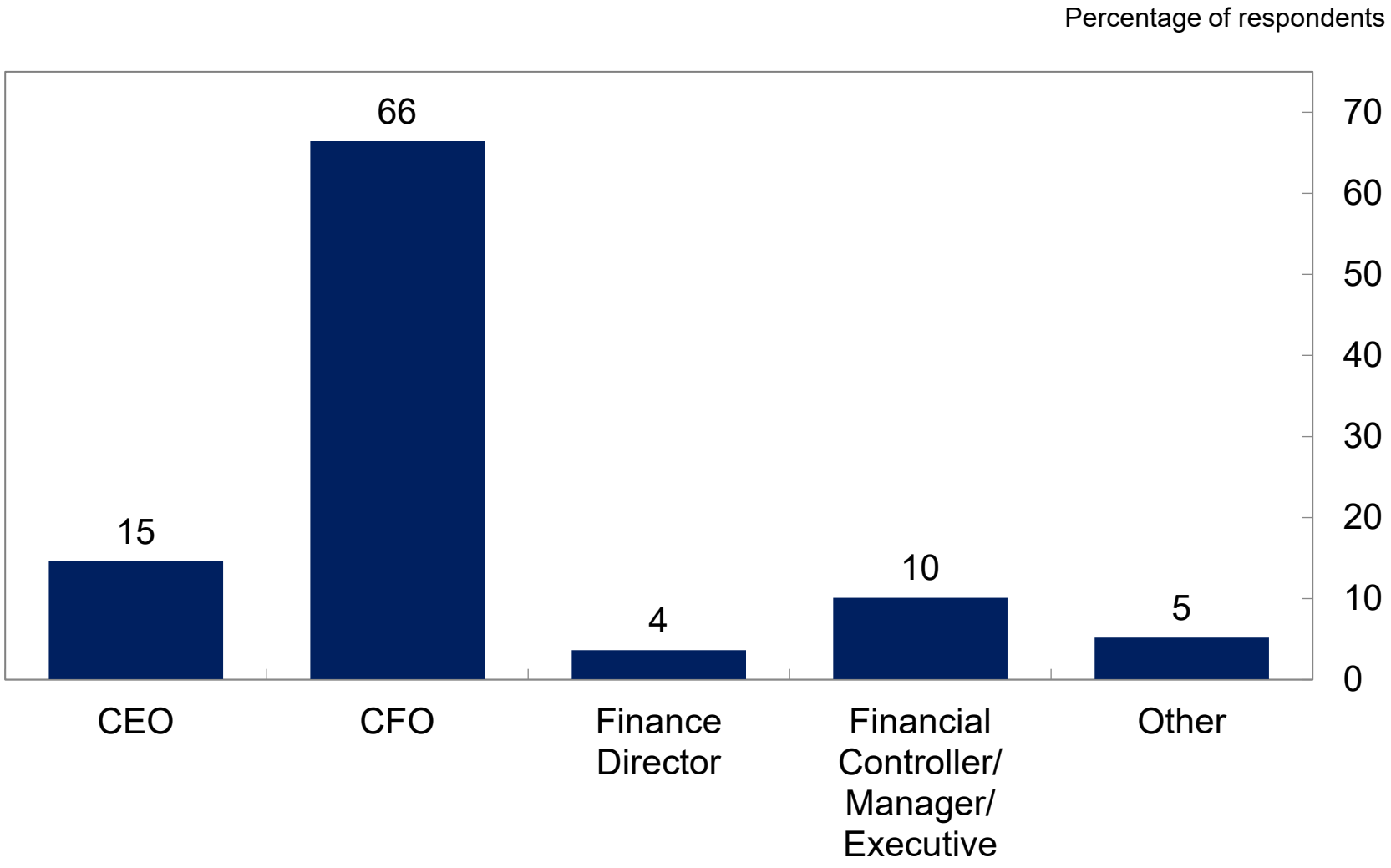
The DMP was set up in August 2016. It provides direct insight into business expectations and uncertainty, for example Covid-19, Brexit and Inflation. Our panel draws information from Financial Officers in UK companies operating in a broad range of industries and is designed to be representative of the population of UK businesses.

BANK OF ENGLAND GOVERNOR'S LETTER TO DMP MEMBERS

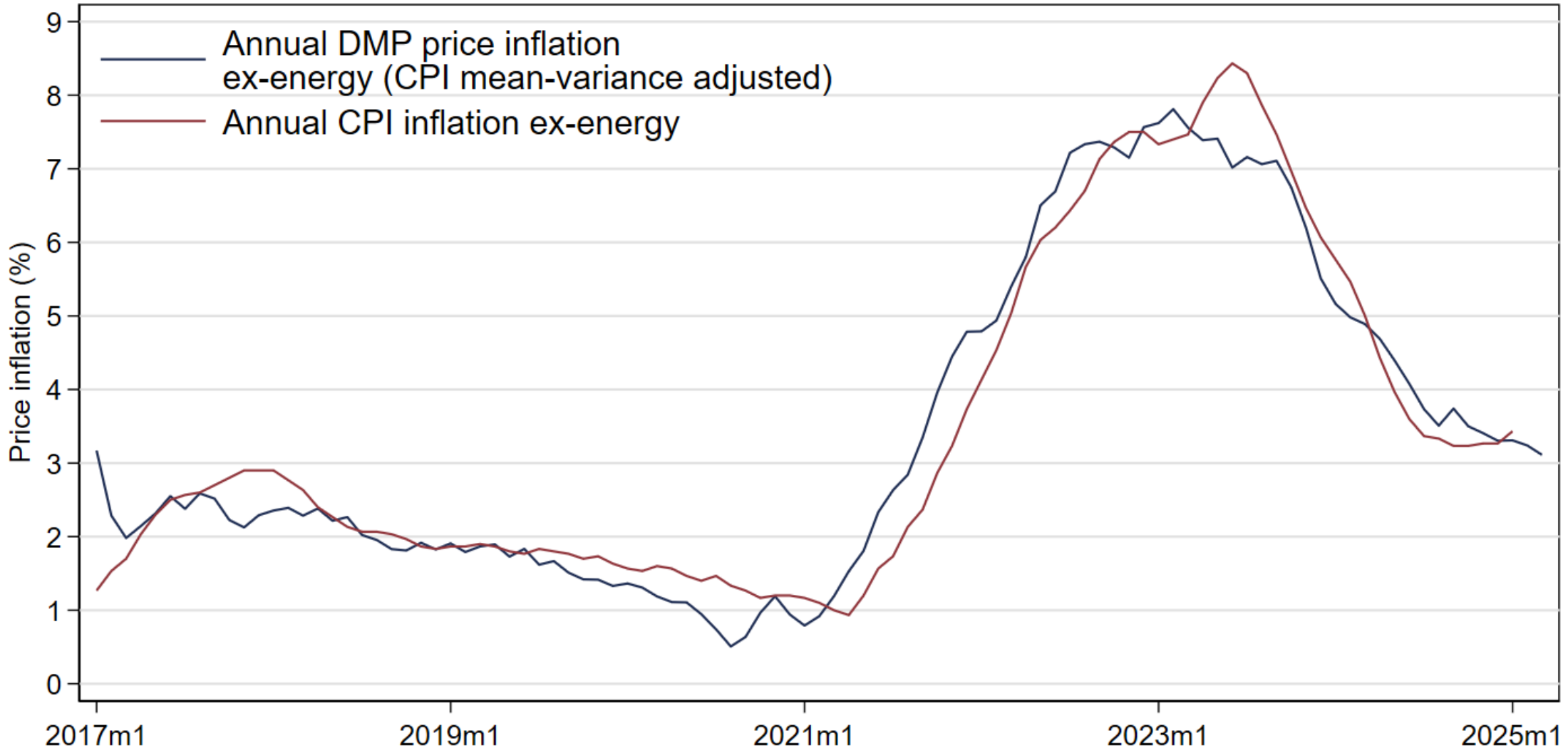
In These Surveys Execs are Recruited by Phone and Then Moved to an Online Panel (So You Know It's a Real Exec Answering….)

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

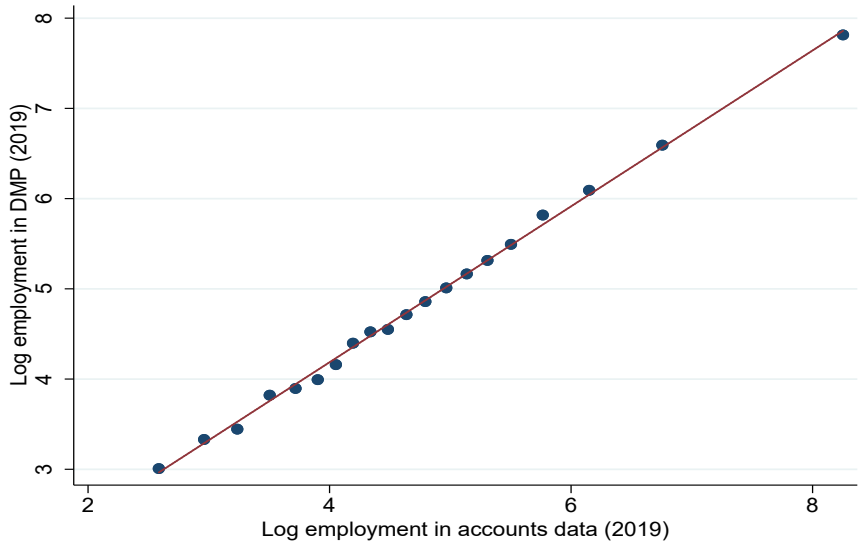
This Personal Recruitment Targets Finance Executives, So That 85% of Respondents are CFOs, CEOs or FDs

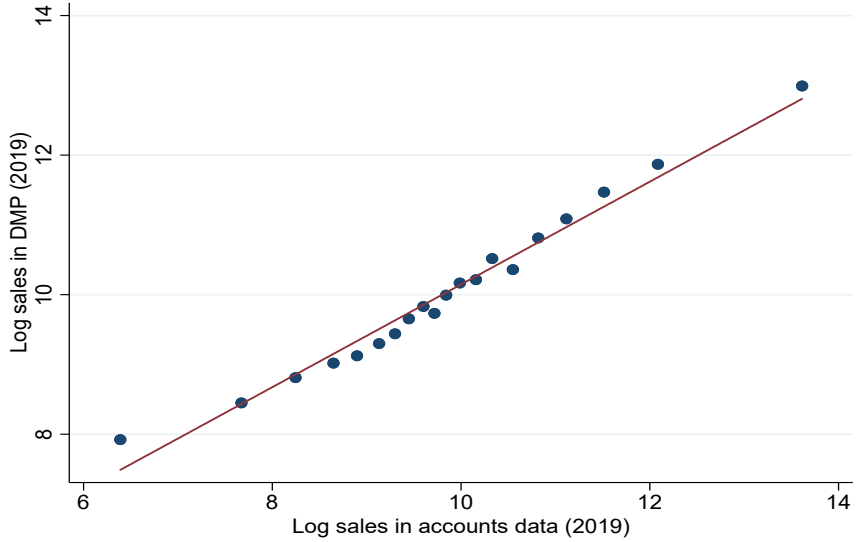


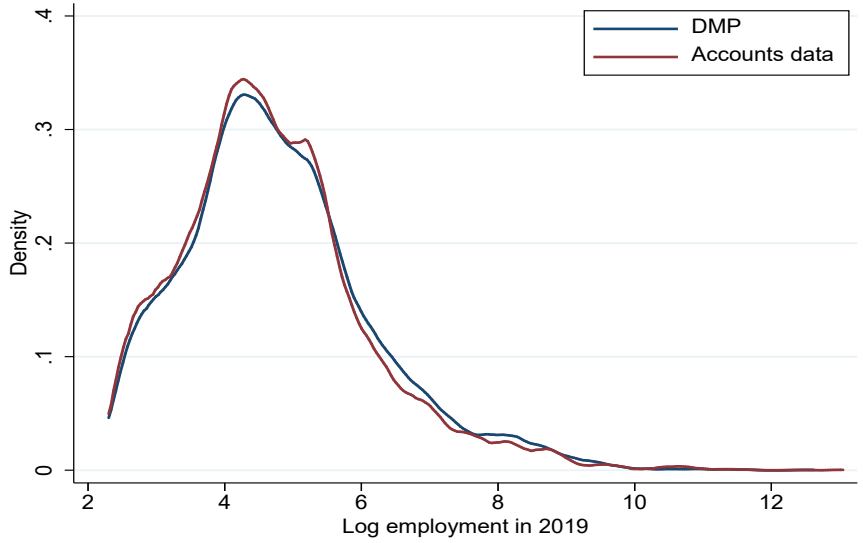
Due to Careful Data Collection the DMP and SBU Deliver Reliable Data
Example (1): Average Price Change Aligns with CPI

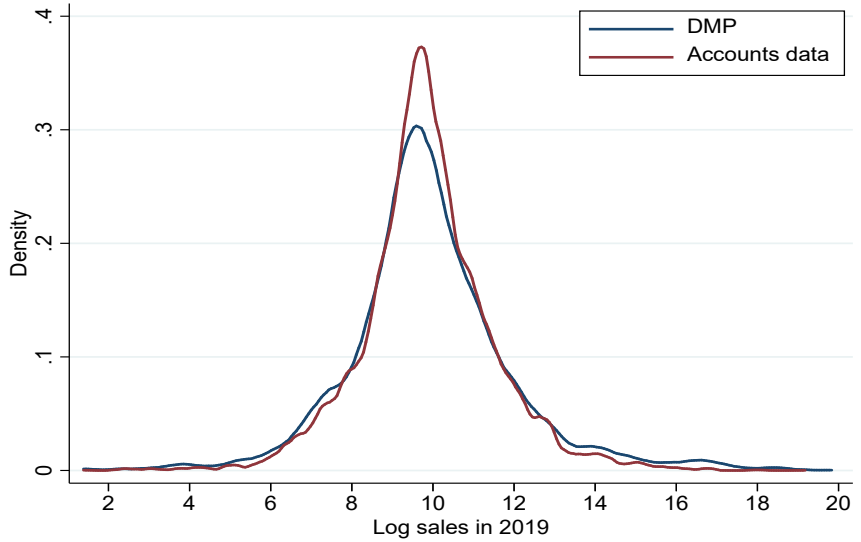


Due to Careful Data Collection the DMP and SBU Deliver Reliable Data Example (2): Firm Responses Match Available Accounting Data









Notes: Sales values from the DMP survey are based on annualised quarterly sales reported by businesses plotted here against Bureau Van Dijk company accounts data. The dots on the top charts each represent 5% of observations, grouped by log employment/sales from accounts data in 2019.

These Surveys In April 2025 and November 2025 Included Questions on AI Use by Executives and AI Impact on Firms, e.g.

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.

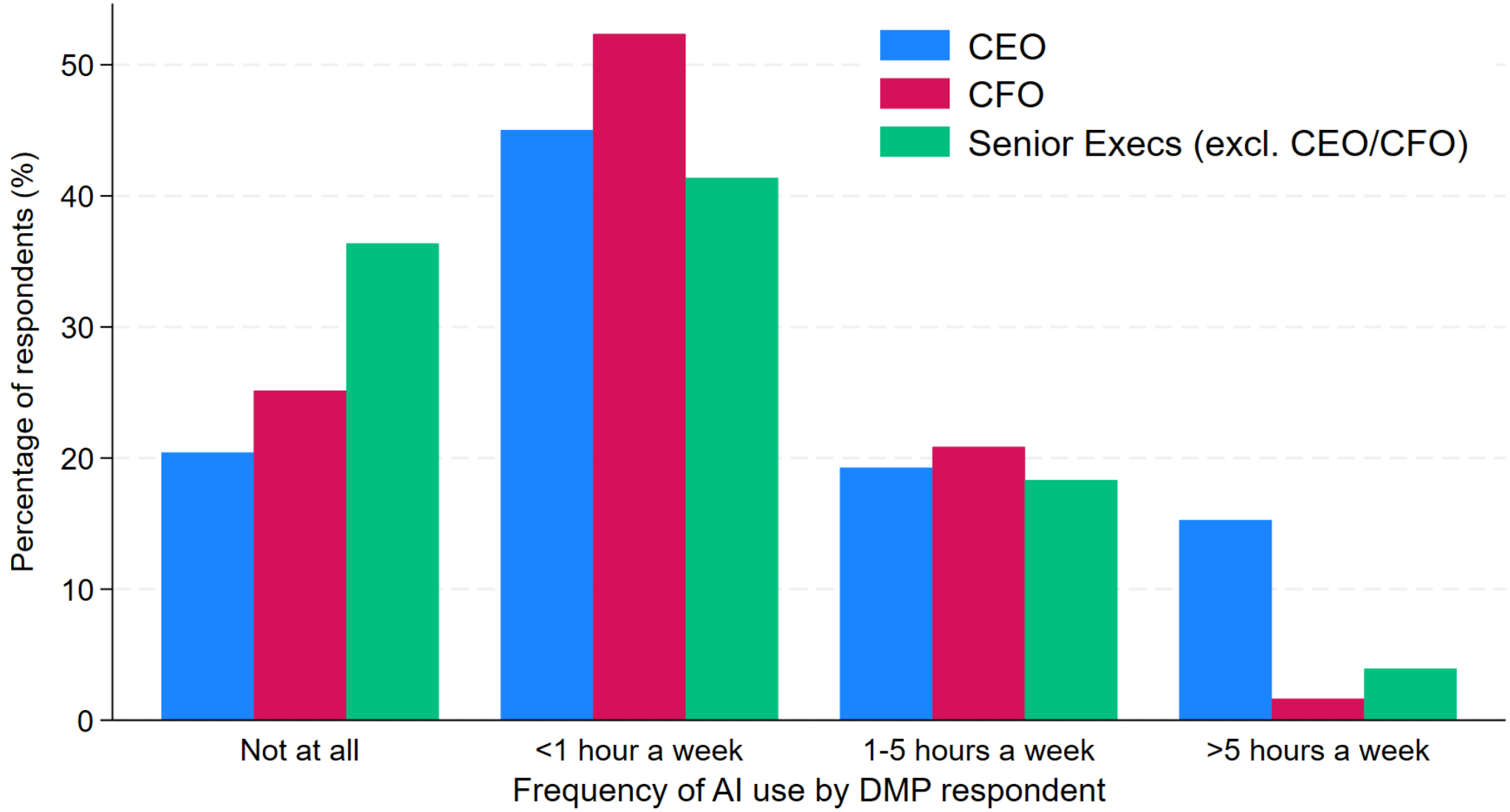
- Not at all
- Up to 1 hour a week
- 1 to 5 hours a week
- More than 5 hours a week

Decision Maker Panel

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?

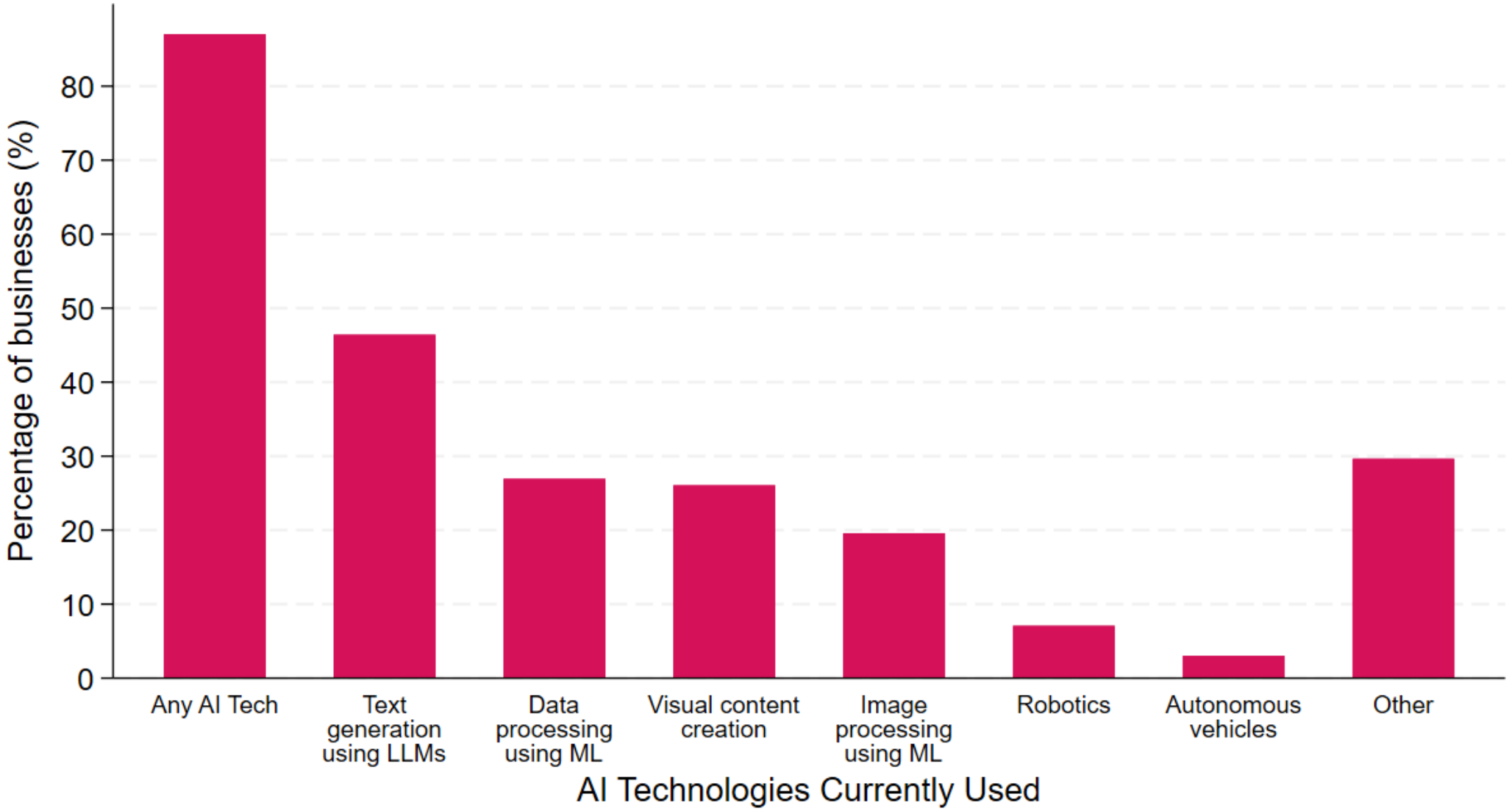
	Past 3 years	Next 3 years
A large positive influence, adding 5% or more	○	○
A minor positive influence, adding less than 5%	○	○
No material impact	○	○
A minor negative influence, subtracting less than 5%	○	○
A large negative influence, subtracting 5% or more	○	○

CEOs and CFOs do use AI, but typically for ≈1 hour a week



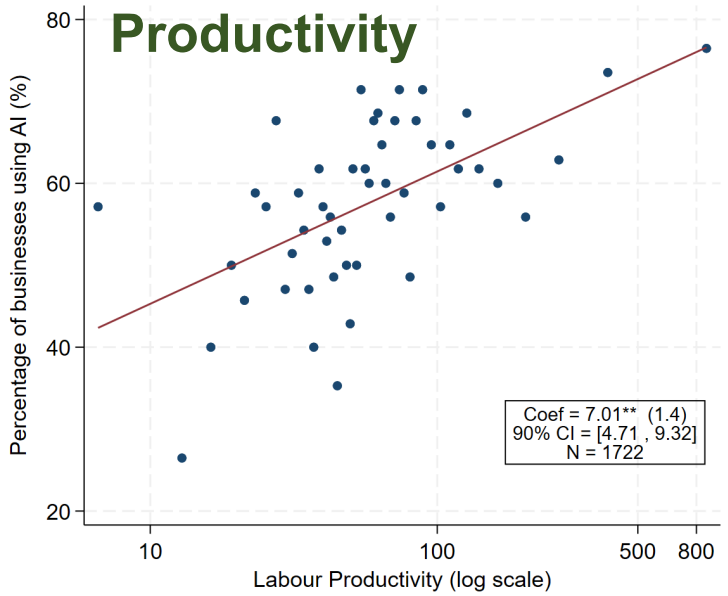
Note: 2329 responses from November 2025

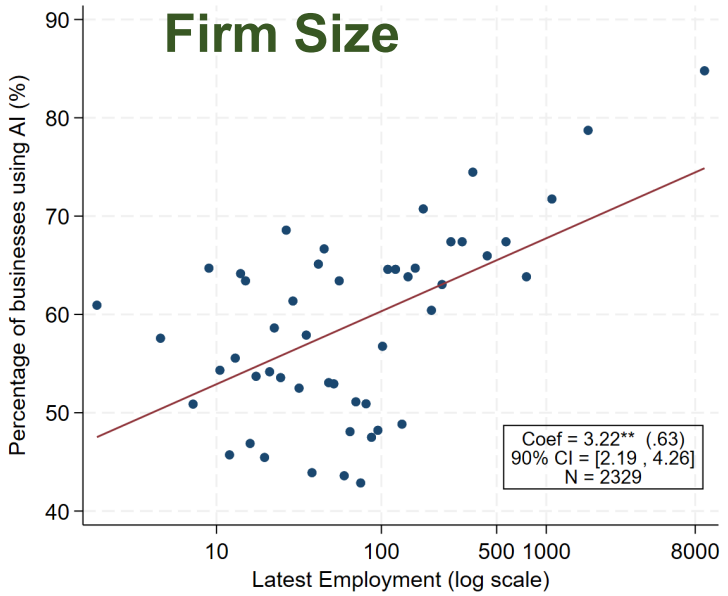
CFO and CEOs say 85% of *their firms* use AI

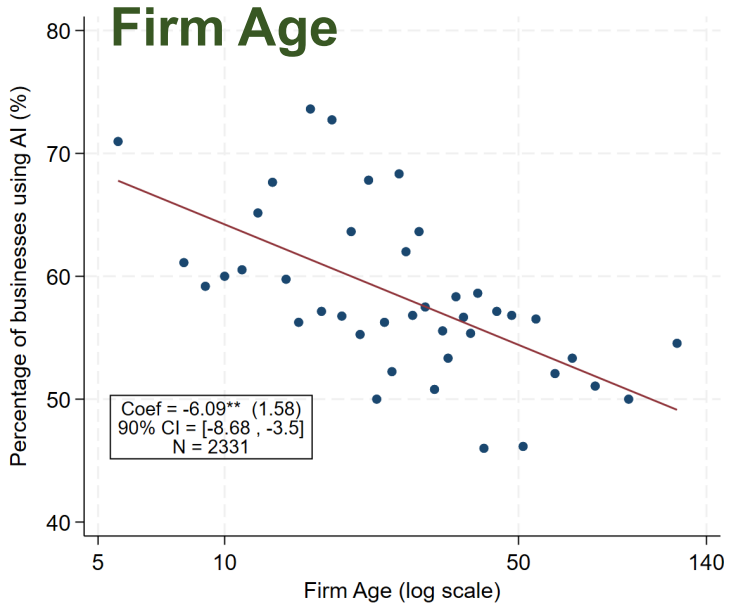


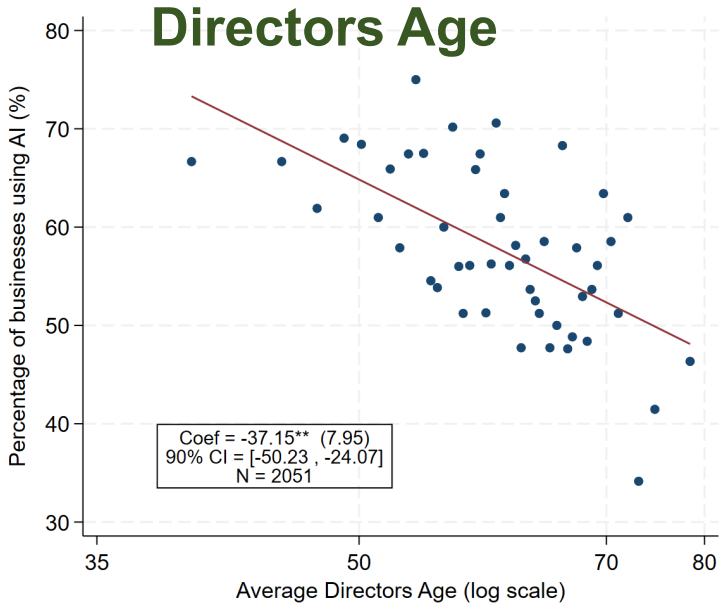
Note: 1085 responses from November 2025

AI use is higher in more productive, larger and younger firms

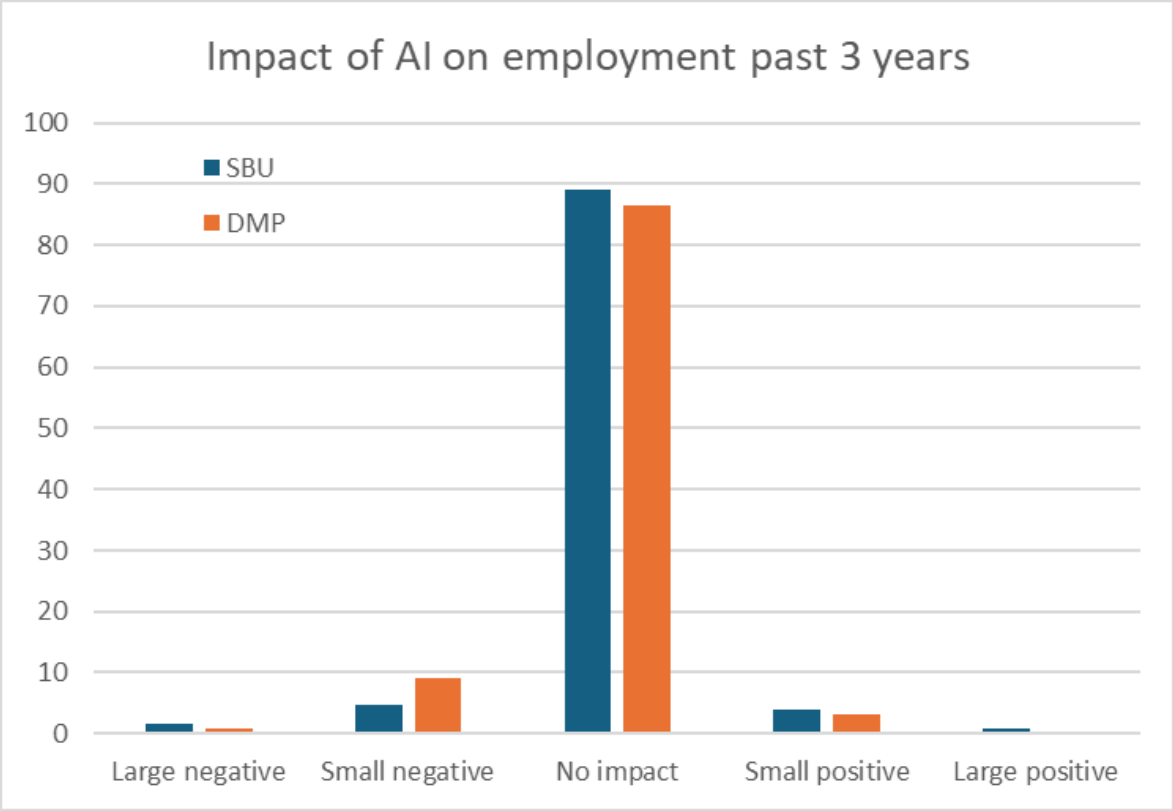


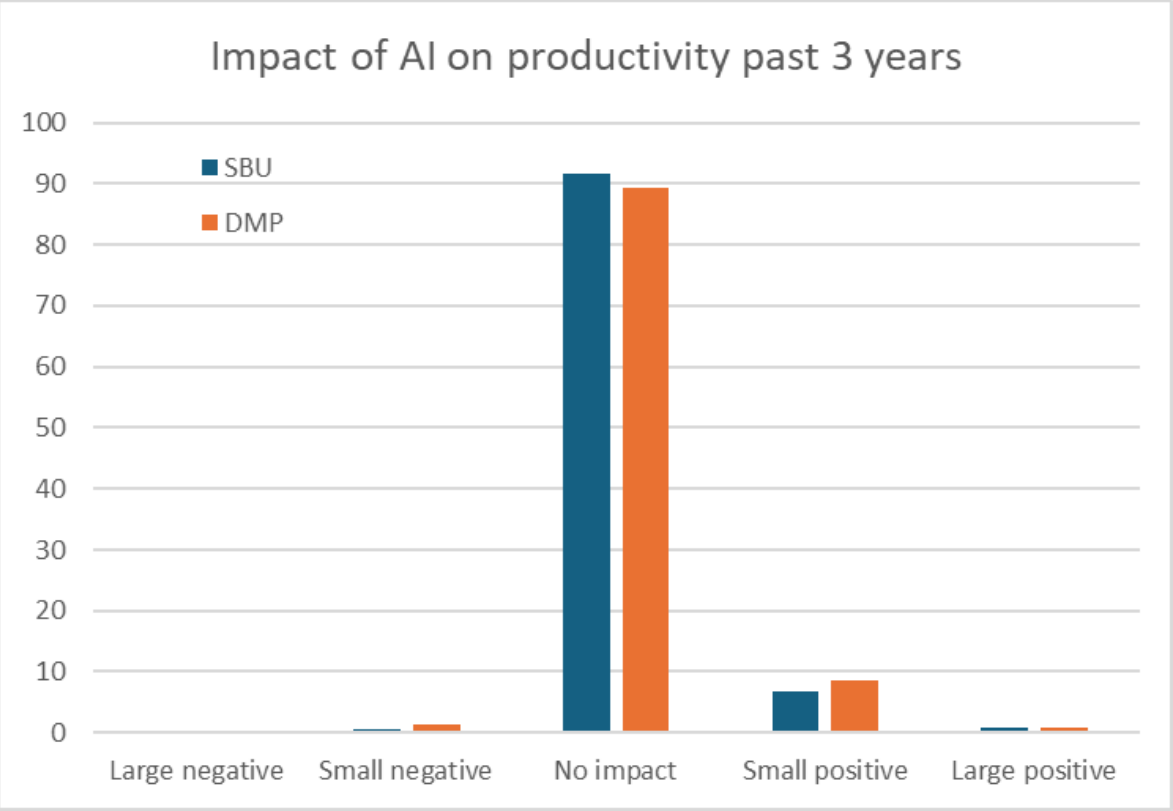






Impact: CEOs and CFOs report little AI impact in the last 3 years

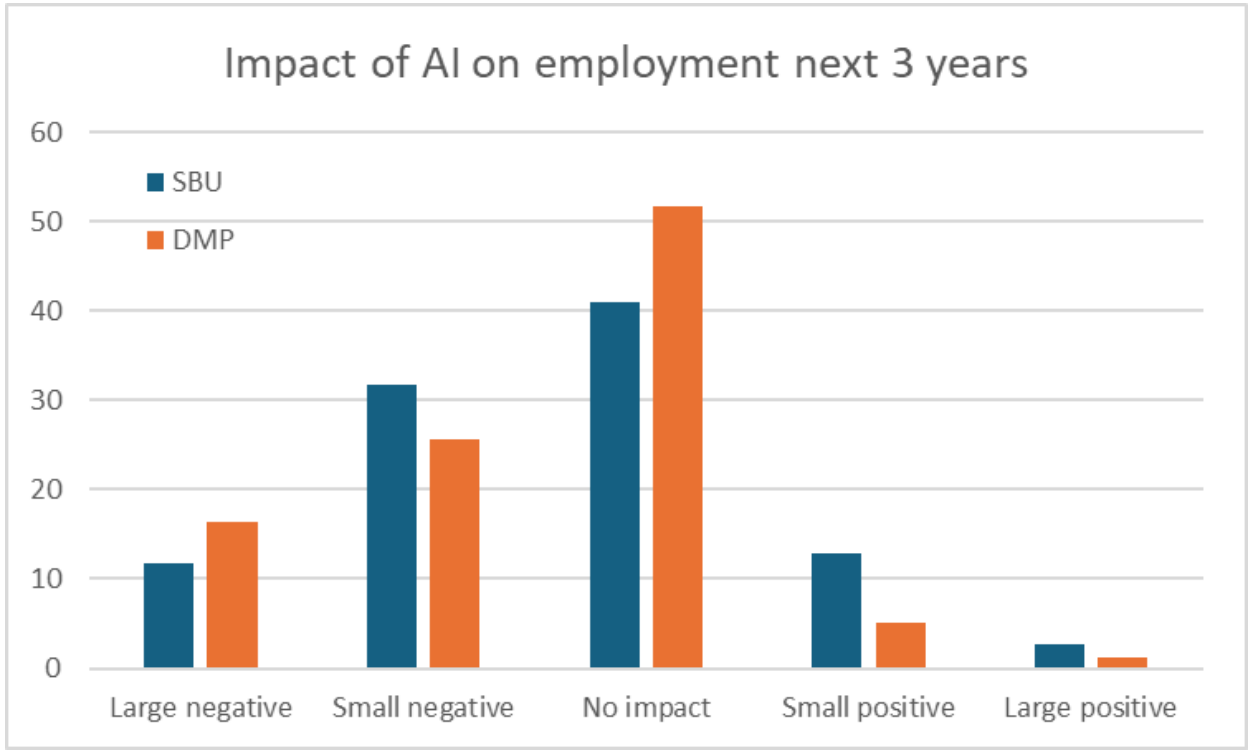


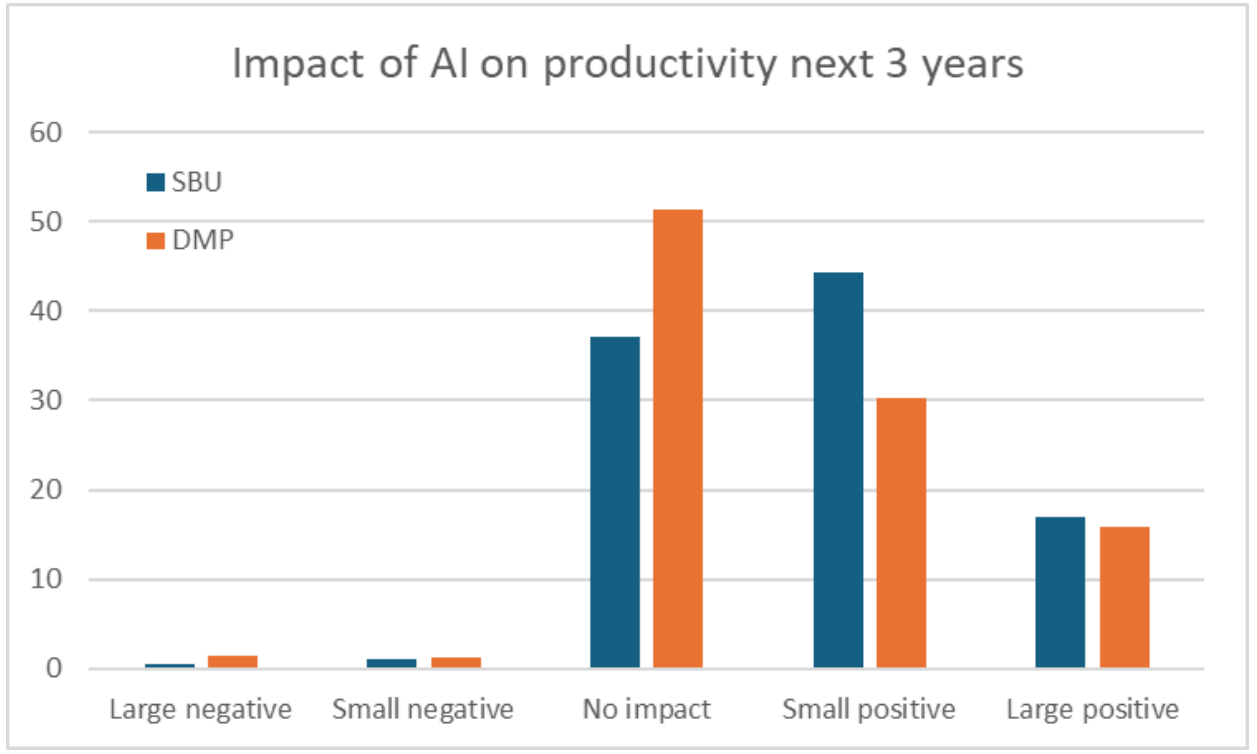


UK and US firms consistently both report very little overall impact of AI so far

So, by November 2025 appears AI has had limited impact aggregate economy impact

Impact: CEOs and CFOs predict large impacts in the next 3 years





UK and US firms do see large impacts in the next 3 years

Forecast employment down by about 2% and productivity up by about 2% - big effects!

WFH is already here, is measured well, and has stabilized at about 25% of days (3x jump vs 2019)

AI is rising fast, is measured poorly (in firms), with little impact so far, but likely large long-run impact