

# Management and Reskilling in the Age of GenAI

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Harvard Business School



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# The GenAI Paradox

# Massive potential

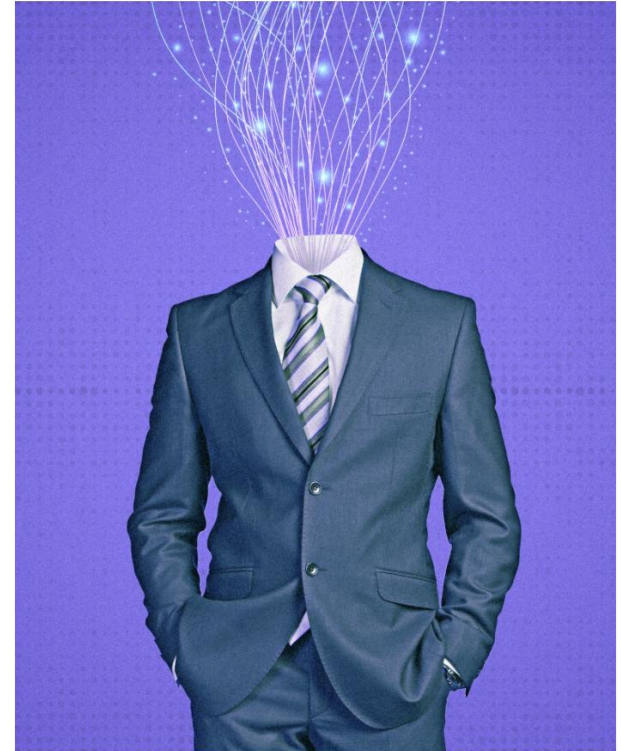
*“AI is capable of doing all our jobs—my own included.”*

Sebastian Siemiatkowski, CEO of Klarna, January 2025, X

## AI's Next Challenge: Take the CEO's Job

Why big-tech bosses say artificial intelligence is coming for them, too

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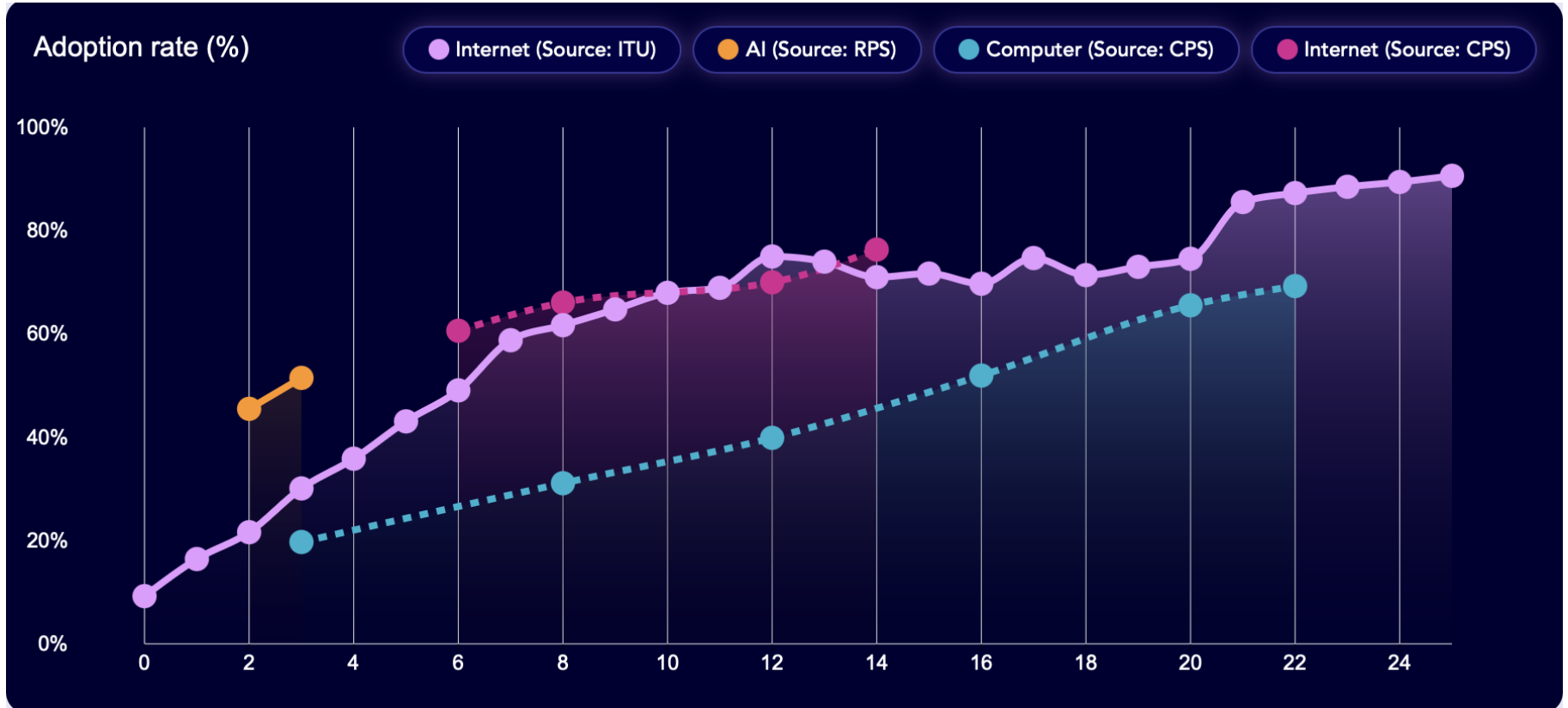
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By [Tim Higgins](#) [Follow](#)

Dec. 7, 2025 at 9:00 am ET

# Massive diffusion



Source: Generative AI Adoption Tracker, Project on the Workforce (Bick, Blandin, Deming and Gazzaneo, 2025)

# Unclear impact—so far

Limited business **adoption** (US Census, September 2025)

- Only **10%** of US firms using AI to produce goods or services

Limited **aggregate** labor market **impact**

- No visible shift in exposed occupations (Yale Budget Lab, 2025), workers' earning or hours of work (Danish data, Humlund and Vestergaard, 2024)

Limited impact on **work behaviors** (66 firms, randomized Co-pilot allocation; Dillon et al., 2025)

- 31% reduction in time spent writing emails, no change in meetings



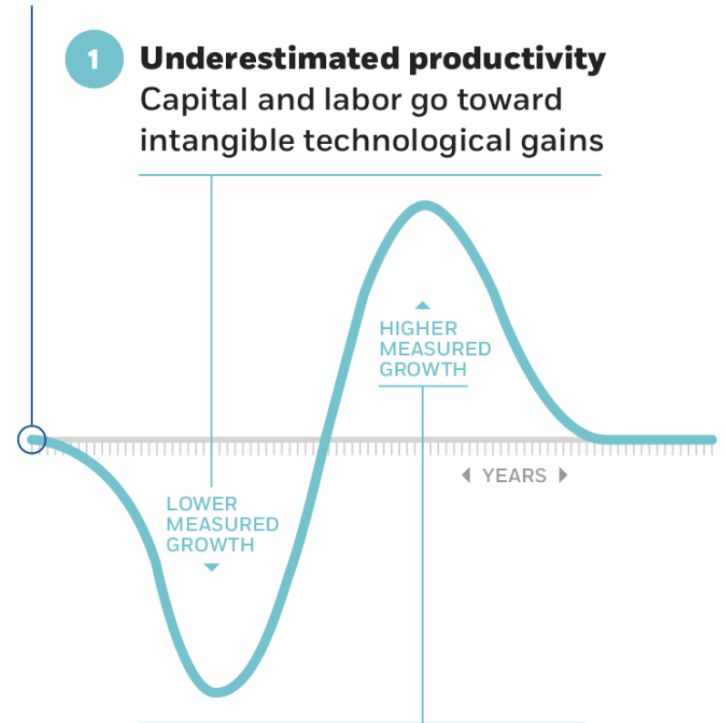
# Hype or reality?



*"It will be as big a deal as the PC"*  
Steve Jobs, 2001

## The productivity J-curve

Skewed measurement of productivity growth after a *major new technology* is introduced



- 2 **Overestimated productivity**  
Intangible gains from prior years show up in the data

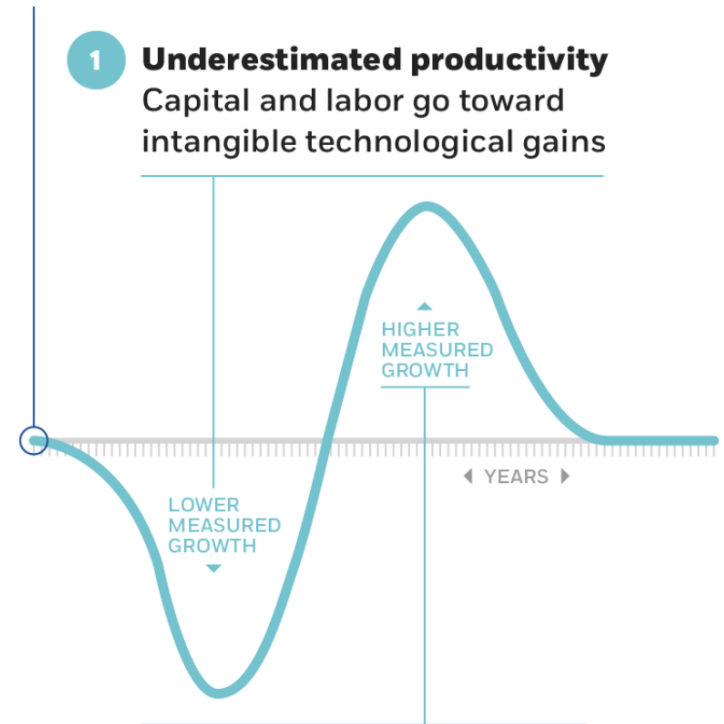
Brynjolfsson et al., 2018

# Two claims

1. **Technology** creates capacity; **organizations** determine value
2. Adoption frictions are not “noise”—they are **systematic** and **manageable**

## The productivity J-curve

Skewed measurement of productivity growth after a *major new technology* is introduced



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# Management and Reskilling in the Age of GenAI

What can  
GenAI do?

Why is GenAI  
adoption hard  
to scale?

What can we  
do about it?

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# Management and Reskilling in the Age of GenAI

What can  
GenAI do?

# Gen-AI's superpower: capturing and unleashing tacit knowledge



*“Rather than relying on hard-coded procedures, **AI learns by example**, gains mastery **without explicit instruction** and acquires capabilities that it was not explicitly engineered to possess.*

*This allows AI to engage in **expert judgement**—a capability that, until now, has fallen within the province of elite experts.”*

*Applying AI to Rebuild the Middle Class, (Autor, 2024)*



# An exciting possibility

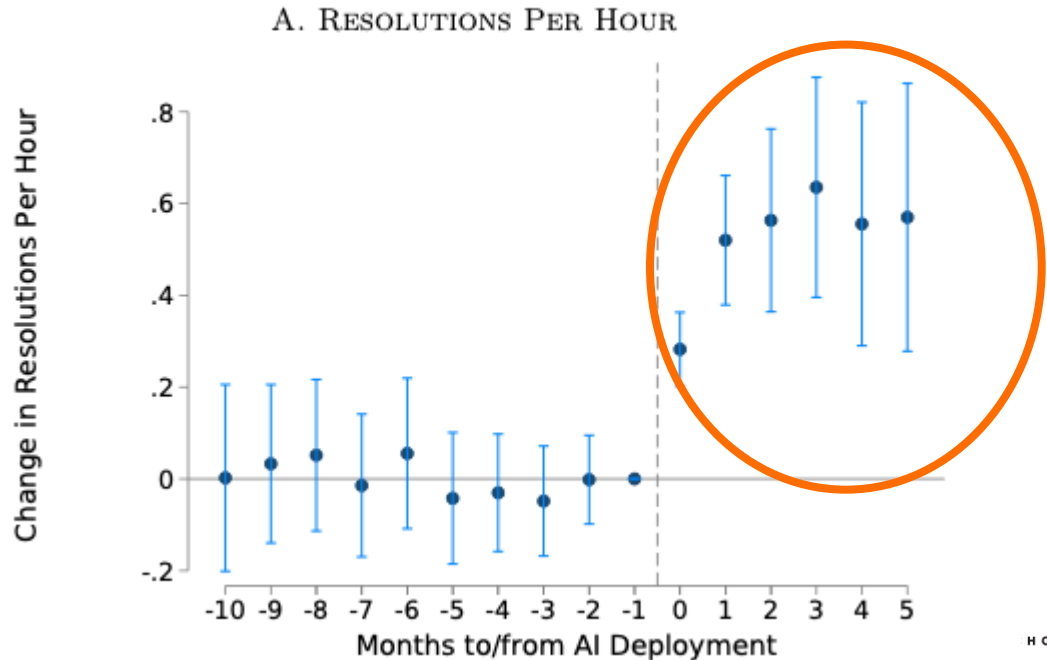
Scaling knowledge across all layers of the organization, at a fraction of the cost of human experts

# Example #1: Co-Pilot helps workers in low-skill occupations be more productive



*Generative AI at Work*  
(Brynjolfsson, Li and Raymond, QJE 225)

FIGURE 3: EVENT STUDIES, RESOLUTIONS PER HOUR



# Co-pilot lifts low-skill workers most



The productivity impact of AI is much larger for workers with **limited knowledge at deployment**

FIGURE 5: HETEROGENEITY OF AI IMPACT, BY SKILL AND TENURE

A. IMPACT OF AI ON RESOLUTIONS PER HOUR, BY SKILL AT DEPLOYMENT



# Example #2: Individual+AI = Human team



Figure 2: Average Solution Quality

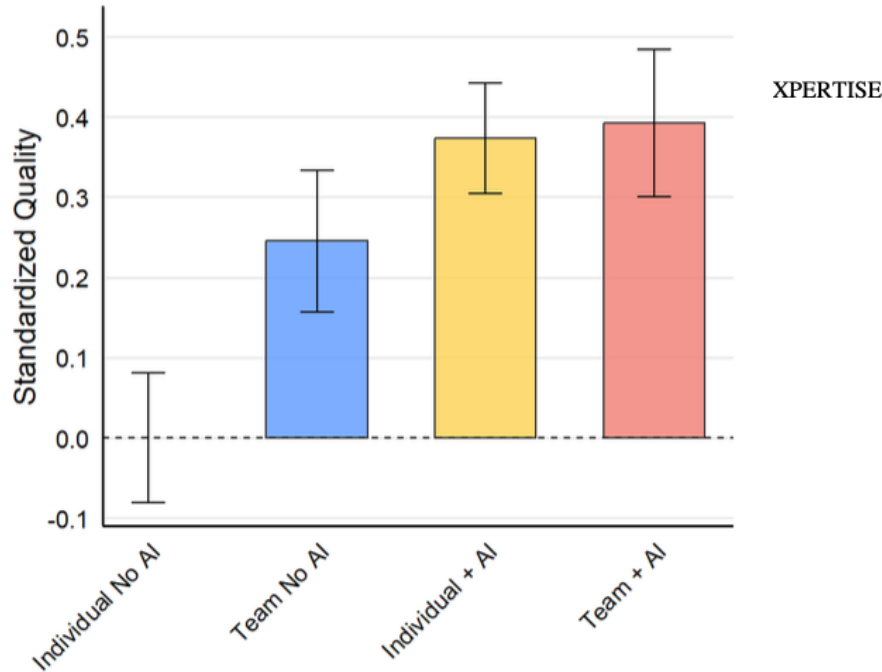
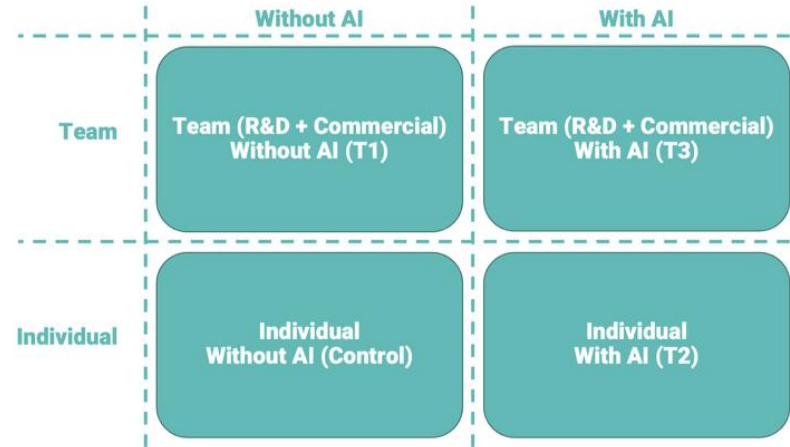


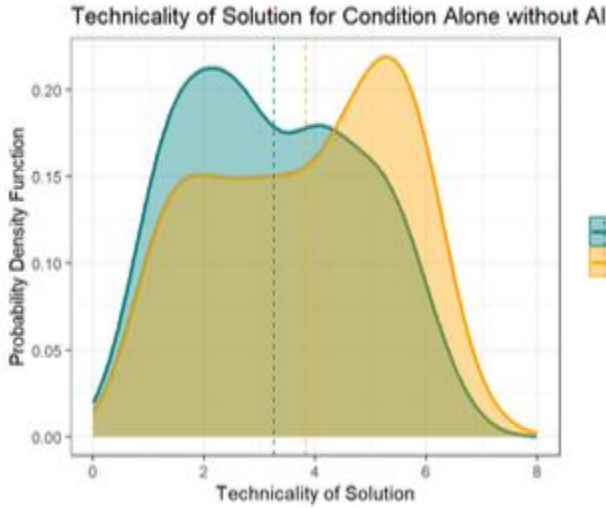
Figure 1: Treatment Matrix



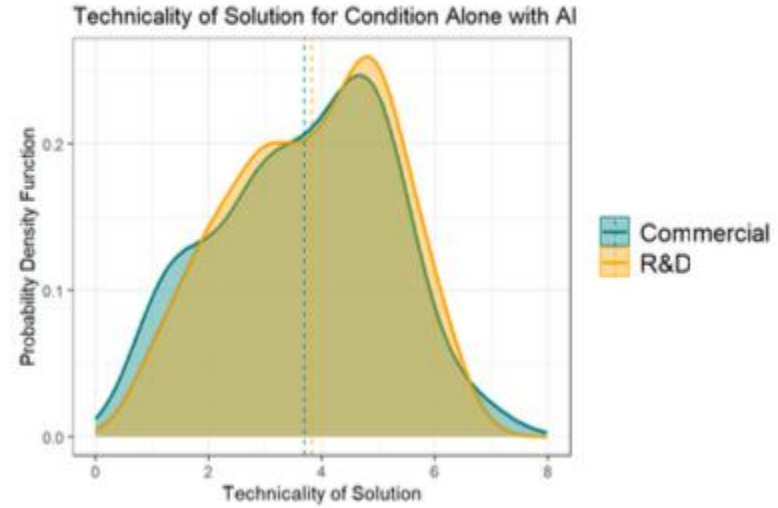
# ...and bridge across knowledge silos



Figure 6: Degree of Solution Technicality for Individuals



(a) Individual - No AI



(b) Individual - With AI

# AI Agents

AI Agents can complete full tasks, reason independently, collaborate, etc.

Who benefits (or loses) from their introduction depends on the AI Agents' level of **autonomy** (Ide and Talemas, 2024)

- If they are only as good as **workers**=> they can substitute lower skill workers, and benefit experts (who become managers of AI agents)
- If they are as good as **experts**=> they can substitute low quality experts, and potentially benefit workers (now matched with better AI-bosses)

# Example: Klarna's Customer-Service AI Assistant

Handles 2.3 million chats, doing the work of approximately 700 human agents at “par with human CSAT” (700 people laid off in 2022)

Cut repeat inquiries by approx 25%

**Headcount reduction from 5,500 to 3,400 (40%) in three years, helped by “AI adoption and natural attrition”**

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# Management and Reskilling in the Age of GenAI

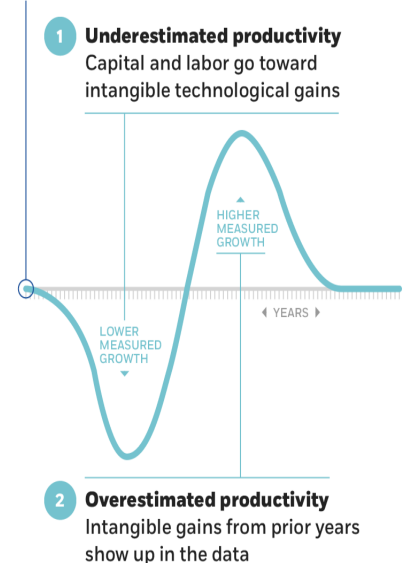
Why is GenAI  
adoption hard  
to scale?

# The argument in a slide

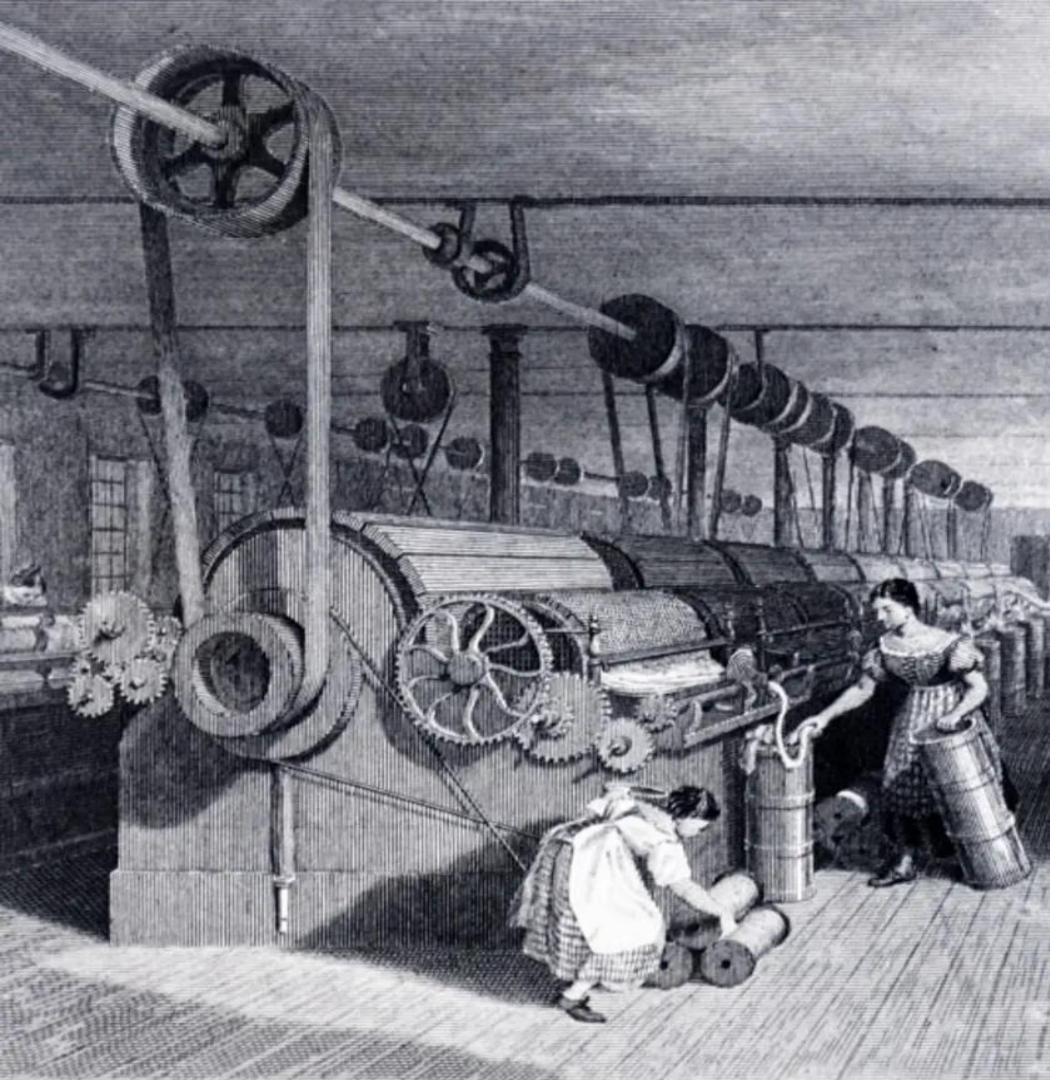
1. GenAI is a **General Purpose Technology (GPT)**: productivity depends on technological and organizational complements → **weak links** can substantially attenuate progress (Jones, 2026)
2. Creating and leveraging complements requires **costly adjustments** → technology adoption does not result in immediate productivity gains (J-curve)
3. **Adjustment costs** vary across and within firms → technology adoption will have very heterogeneous impacts across and within organizations

## The productivity J-curve

Skewed measurement of productivity growth after a *major new technology* is introduced

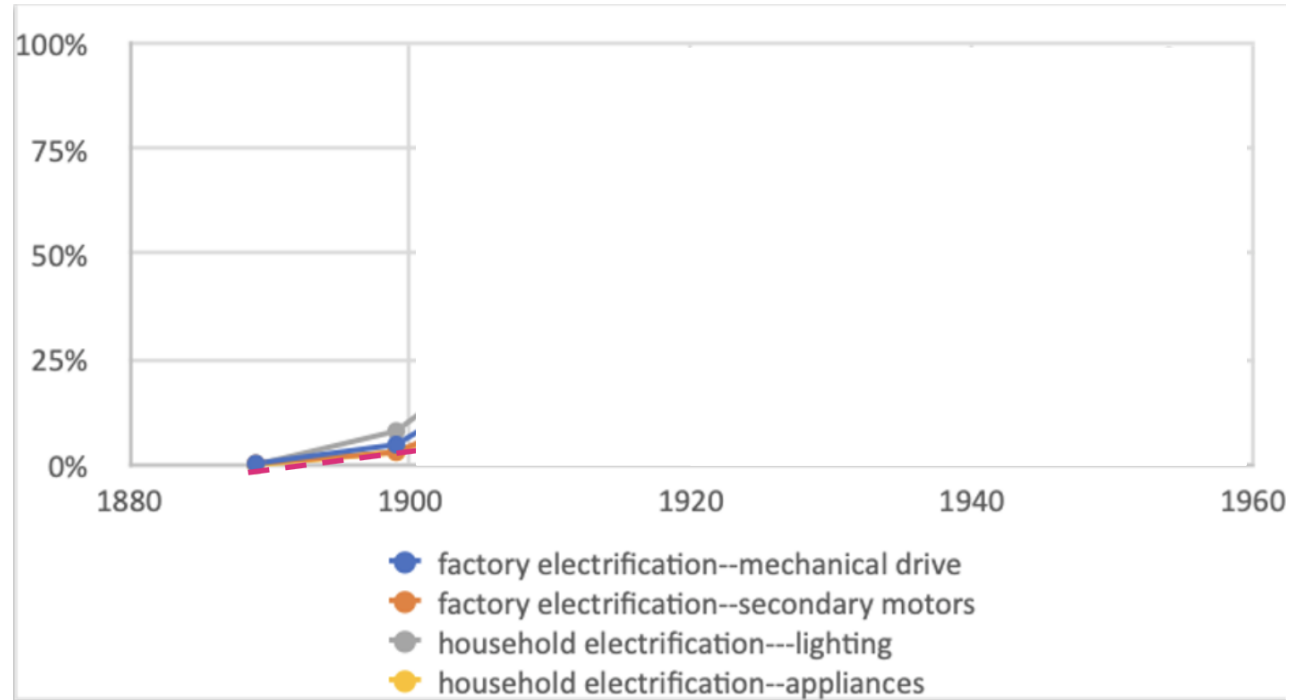


Brynjolfsson et al., 2018



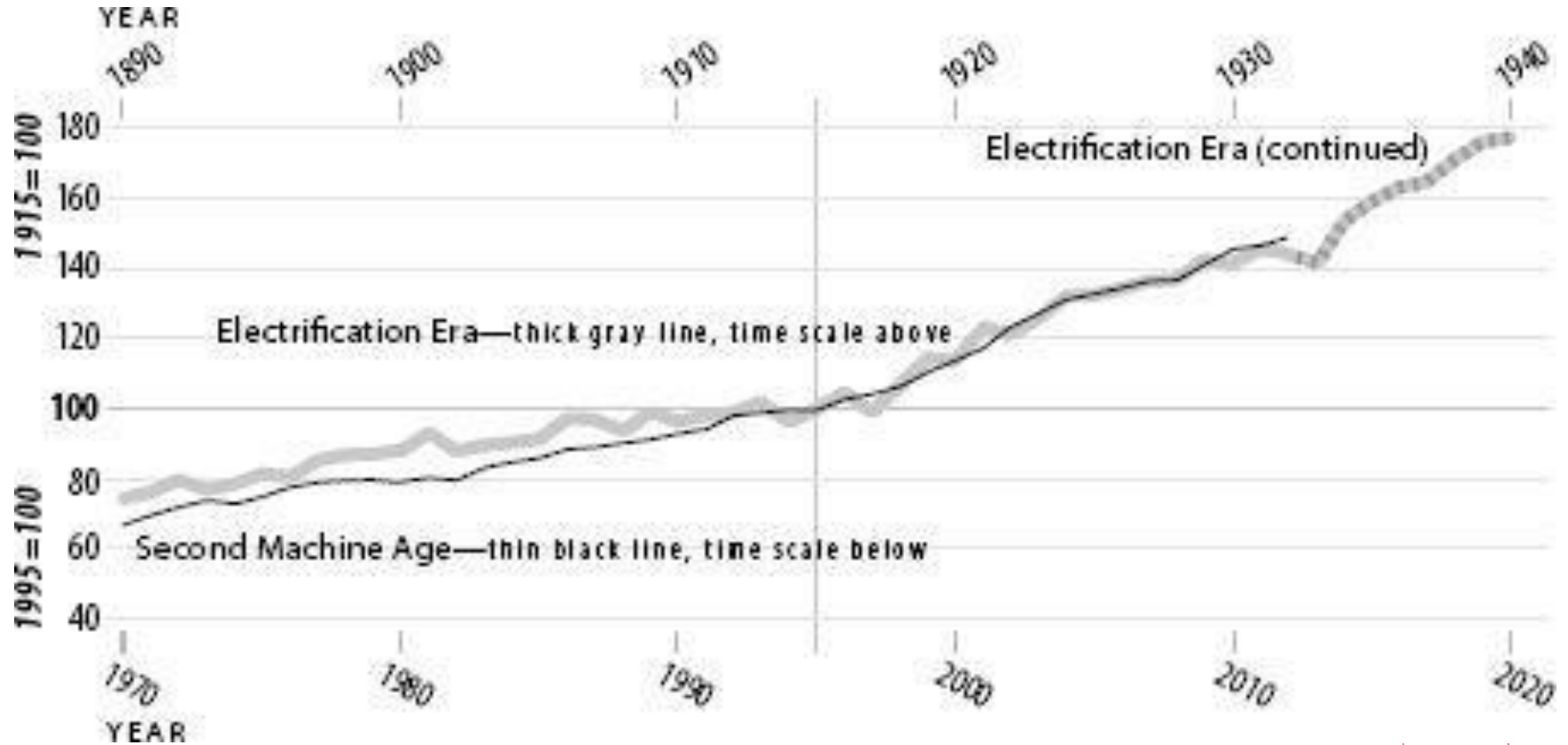
# Electricity: 40 years of adaptation

**Point solutions:**  
Change source of energy



Source: Ajay Agrawal, Power & Prediction, Dec 2024

# ICT: 20 years of adaptation



Source: Brynjolfsson and McAfee, 2010

# Tech adoption: an “org” perspective

Occupations as bundles of tasks that can be allocated between labor and capital (Autor, Levy and Murnane, 2003; Acemoglu and Autor, 2011; Acemoglu and Restrepo, 2019)

When a technology improves, opportunities for **task reallocation** emerge

- **Displacement:** some tasks shift from workers to machines
- **Reinstatement:** new tasks (and jobs) emerge when workers have comparative advantage

But instead of taking this process as instantaneous and costless (ie, comparing steady states), **focus on the transition from one state and the next inside firms**

- **What shapes the speed and depth of the transition?**

# Early attempts: look across firms

Americans to I.T. Better (Bloom, Sadun and Van Reenen, 2012)

Leverage panel of firm level data to show US firms based in Europe got MORE productivity from identical ICT investments than European firms

## Why?

US firms had complementary organizational practices (flexibility, merit-based promotions, decentralization)

## Implication:

The binding constraint was not technology access—it was organizational adaptation

# Current attempts: go inside the firm



Generative AI

## A Systematic Approach to Experimenting with Gen AI

To reduce risk, refine their strategies, and optimize adoption at scale, companies need more testing at the organizational level. by Johannes Berndt, Florian Englmaier, Raffaella Sadun, Jorge Tamayo and Nikolaus von Hesler

From the Magazine (January–February 2026)



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# Adjustment costs in GenAI adoption

Three types of **adjustments**, which directly affect workers

1. **Experimentation**: learning what the technology can do
2. **Task switching**: reallocating effort from automated tasks to remaining or new tasks
3. **Occupational mobility**: reallocating effort to new occupations complemented by the technology

Two insights emerging from early evidence

- Each of these adjustments is **costly**, with different impacts across different workers
- Adjustment costs can be significantly reduced by targeted **managerial interventions**

# 1. Experimentation

1. Experimentation

2. New tasks

3. New jobs

Before technology can change task allocation, workers must learn what the technology can do and how it applies to their specific context

## **Experimentation is costly for individual workers**

- It takes time from current production
- Has uncertain returns
- May reveal that the worker's expertise is automatable

**High-expertise** workers face the greatest experimentation costs

- Their opportunity cost of time is higher
- They have the most to lose if AI automates expert tasks (Autor and Thompson, 2025)

# Case study: the deployment of a sales Copilot at Microsoft

1. Experimentation

2. New tasks

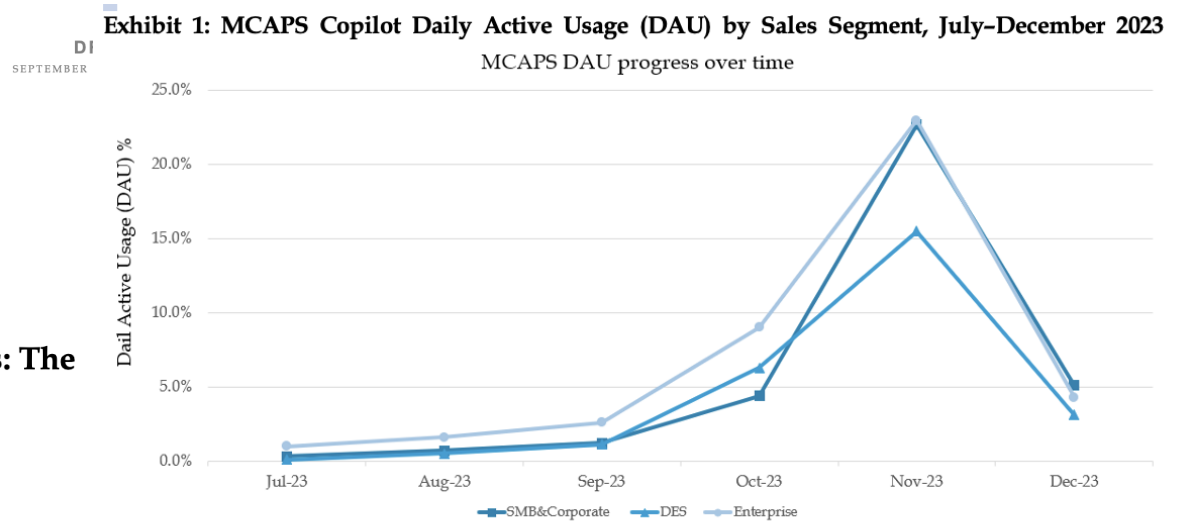
3. New jobs



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SHUNYUAN ZHANG

## Microsoft Customer and Partner Solutions: The Deployment of Copilot (A)



Percentage of sellers using Copilot daily across Enterprise, Digital Enterprise Sales (DES; Microsoft's digitally led enterprise motion within MCAPS), and Small Medium Business & Corporate (SMB&C) segments.

Source: Company document.



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# Managing experimentation

1. Experimentation

2. New tasks

3. New jobs



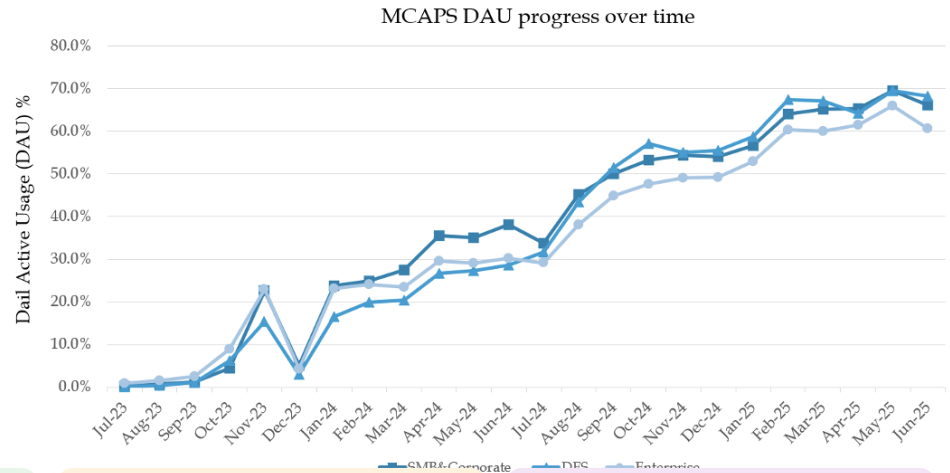
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SHUNYUAN ZHANG

## Microsoft Customer and Partner Solutions: The Deployment of Copilot (B) an

DRAFT  
SEPTEMBER 10, 2025

Exhibit 2: MCAPS Copilot Daily Active Usage (DAU) by Sales Segment, July 2023 – June 2025



1

**Level-Setting**

Reset expectations

2

**Champions**

Empower early adopters

3

**Role Immersion**

Tailor to job tasks

4

**Habit-Building**

Embed in workflows

# 2. Shifting to new tasks

1. Experimentation

2. New tasks

3. New jobs

Once a new GenAI application has been deployed, workers must reallocate effort from automated tasks to remaining tasks

- Example: from writing to verifying (Noy and Zhang, 2023)

## **Task reallocation is costly**

- Workers have accumulated task-specific human capital that depreciates when they switch tasks



# Technology Adaptation in a Bank

(Brandimarti, Minni, Sadun and Tamayo, 2026)

1. Experimentation

2. New tasks

3. New jobs

## Setting:

- Large Colombian bank (10K employees) adopting a **new digital strategy**
  - Apps automating routine tasks (opening of accounts, simple transaction)
  - Humans shifting to complex tasks (SME loans)
- Commitment to no firing policy
- Staggered implementation across branches

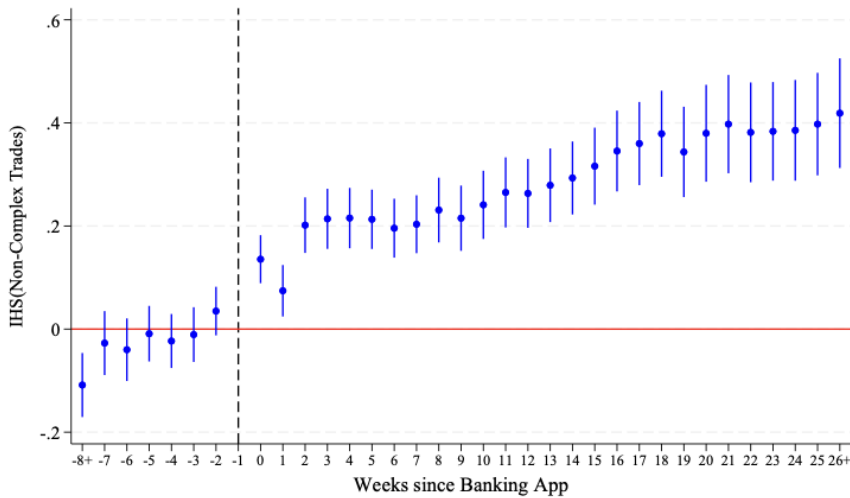
## Results

- Massive increase in automated transactions, no hiring/firing=> increase in productivity
- **Very limited switching towards complex tasks, especially among high-tenure employees**
- High tenure gap closes after the introduction of **task-specific incentives**

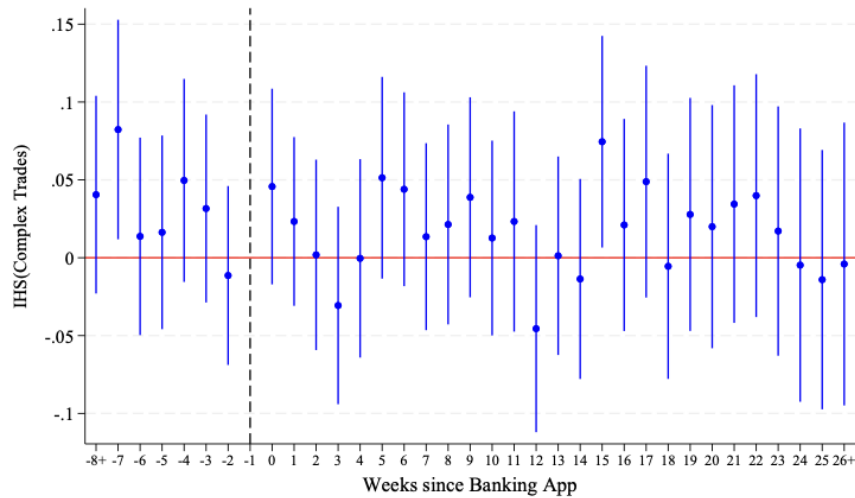


# Increase in productivity, but no switch to high value-added tasks

- 1. Experimentation
- 2. New tasks
- 3. New jobs



(a) Simple (Mobile) Trades



(b) Complex Trades

# Task inertia concentrated among high tenure employees

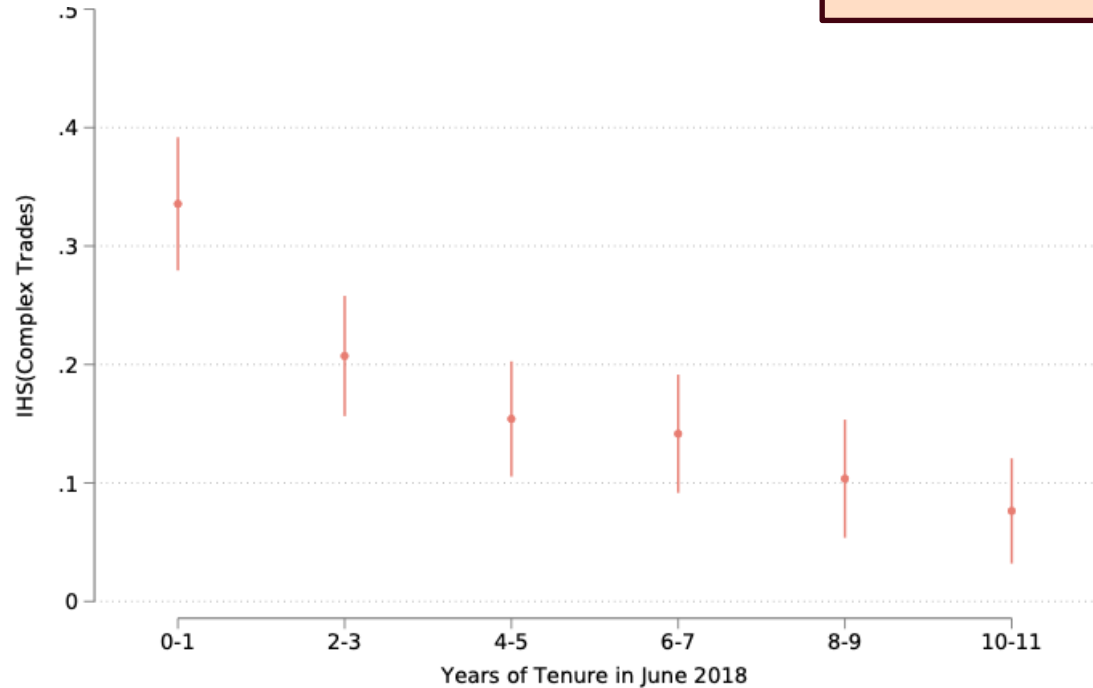
1. Experimentation
2. New tasks
3. New jobs

## Interpretation

- Learning new tasks is costlier for workers develop task-specific expertise (high tenure)

## Incentives work

- The introduction of a task specific incentive flattens the difference between high and low tenure workers



(b) Complex Trades

# 3. Shifting to new jobs

1. Experimentation

2. New tasks

3. New jobs

When technology fundamentally changes an occupation's comparative advantage, workers may need to **change occupations entirely**

## This mobility is costly

- Depreciation of occupation-specific human capital
- Reskilling costs (Manning and Aguirre, 2025)
- **Occupational identity**—workers derive utility from their occupational membership independent of monetary returns



# Who wants to reskill?

(Delfino, Garnero, Inferrera, Leonardi and Sadun, 2025)

1. Experimentation

2. New tasks

3. New jobs

Large sample of unemployed workers in Italy

Discrete choice experiment to estimate interest in reskilling to access new two high-demand jobs (IT and Construction)

Within sample experiment to estimate whether better information can shift intention to reskill

Administrative data to study real-life outcomes



# Identity fit and interest in reskilling

1. Experimentation
2. New tasks
3. New jobs

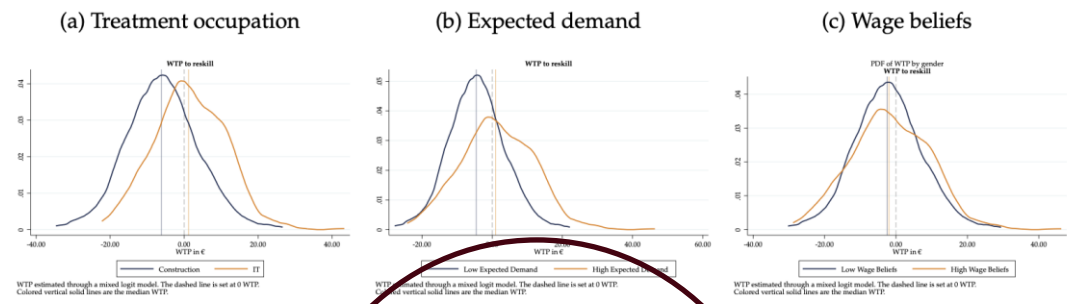
Figure 5: WTP for reskilling: distributions and h

Low interest in reskilling opportunities, despite high-wage prospects and high job finding rate

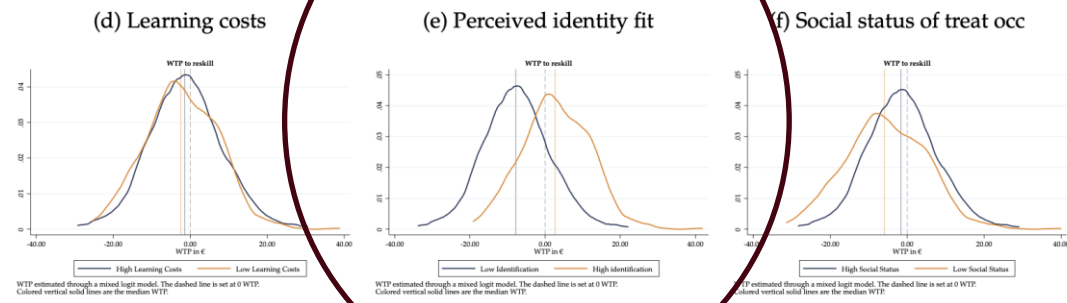
Lack of interest due to both objective and subjective factors:  
**Identity fit** (Akerlof and Kranton, 2010)

€14/hour — the wage premium workers require to consider identity-mismatched training

## 1. By treatment occupation and expected returns



## 2. By learning costs and identity fit



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# Management and Reskilling in the Age of GenAI

What can we  
do about it?

# Shaping the GenAI J-curve

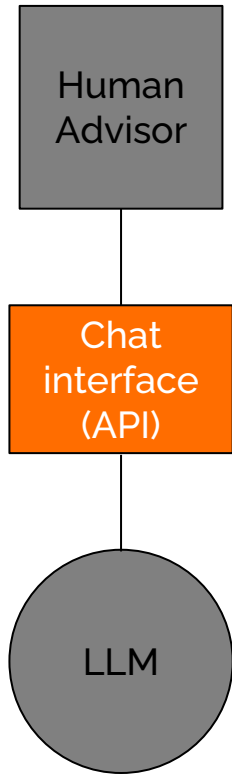
GenAI adoption at scale will be much slower than popular narrative

- Significant adjustment costs across each stages of adoption
- Firm-specific context and capabilities generate heterogenous trajectories

But new organizational approaches are starting to emerge

- AI-native startups (Kim, Kim and Koning and Kim, 2026)
- Organizational experiments among incumbents

# Case study: JPMorganChase



2023

2024

2025

# Training will play a key role for GenAI adoption

Opportunity of nurturing **internal** talent to develop and transmit valuable GenAI skills

- Value of **firm-specific, contextual knowledge** to design and use Gen-AI tools
- Need for **incentives** that facilitate **transmission** and **acquisition** of new knowledge

Challenge of finding talent with valuable GenAI skills in **external** labor markets

- Valuable Gen-AI skills are hard to find and screen for: **NOT just technology**
- **Thin labor markets**, getting thinner due to ageing of the population

# A very different training paradigm

Reskilling in the Age of AI (Tamayo, Doumi, Goal, Kovacz, Sadun)



## Old Training Paradigm

Reskilling is a CSR initiative to support displaced workers

Reskilling is an HR responsibility

Reskilling is a training initiative

Employees need to be convinced to reskill

Reskilling is an individual firm problem

## New Training Paradigm

Reskilling is a strategic imperative

Reskilling is the responsibility of every leader and manager

Reskilling goes beyond training – it is a holistic change management initiative

Employees want to reskill - when it makes sense

Reskilling takes a village

In-depth interviews with Chief Human Resource Officers of 35 firms, 11 industries, 4 continents



# The power of middle managers

Middle managers translate organizational intentions into individual incentives to adopt (or not to)

**Experimentation:** Allocate protected time, provide role-specific guidance, signal legitimacy

**Task switching:** Redesign jobs, offer targeted incentives, support transitions (e.g. making training more palatable to workers)

**Job switching:** Connect training to career paths, make CHQ commitments credible to workers

# Middle managers and training

*Training Within Firms* (Diaz, Nazarett, Ramirez, Sadun, Tamayo, 2025)

Same centrally designed programs, very different take up rates across teams



The **arrival** of a middle manager who supports training is associated with large **increases in training take up** among direct reports

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# Management and Reskilling in the Age of GenAI

What can  
GenAI do?

Why is GenAI  
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What can we  
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# Summing up

1. AI has the potential to generate real productivity gains at task level (RCT evidence)
2. Productively scaling GenAI from tasks to firms will require significant reorganization of work
3. The speed of change for incumbents is slowed down by systematic adjustment costs faced by workers
4. Firm choices—including investments in training and quality of management—can attenuate these costs

# Implications for Research

Need for hard evidence on **organizational adoption of GenAI**

- The popular narrative is being shaped by extreme (positive and negative) views that ignore adoption frictions. This creates fear or overexuberance

Need experiments that manipulate **organizational conditions**, not just technology access

Need to study what shapes the **incentive to change** among workers

- Economic and non-economic factors (e.g. will GenAI adoption requires changes in professional identity)
- The manager channel: what makes managers effective at facilitating adaptation?

# Methods & Policy

## **We CAN do rigorous causal research inside firms**

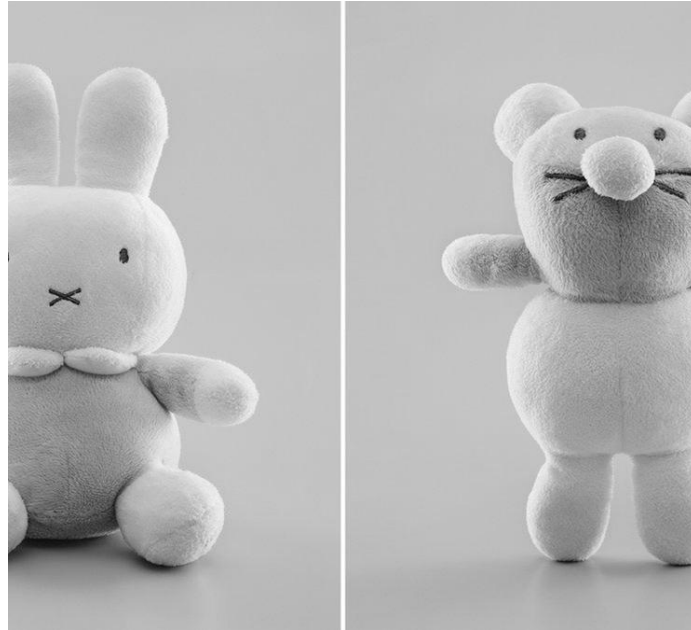
- This requires building deep research partnership with firms, finding areas of mutual interest, promoting commitment to the scientific method

## **Policy makers can make a difference in boosting learning**

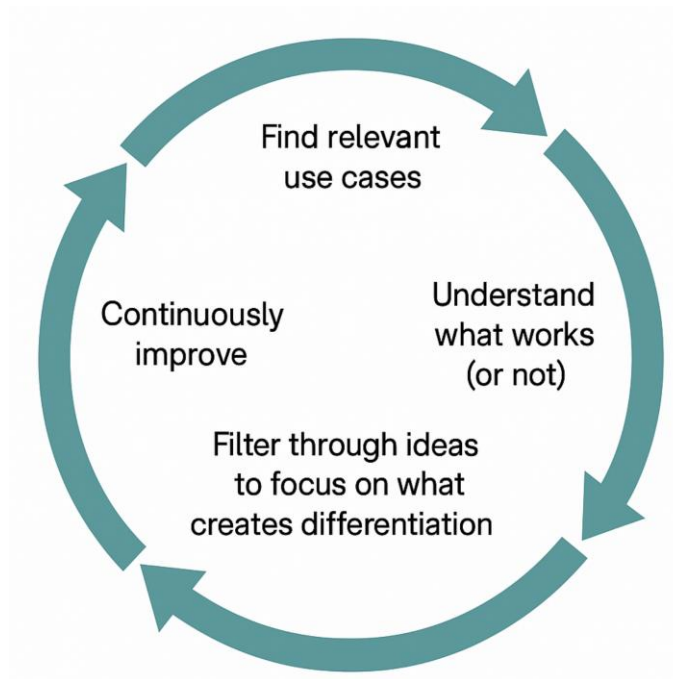
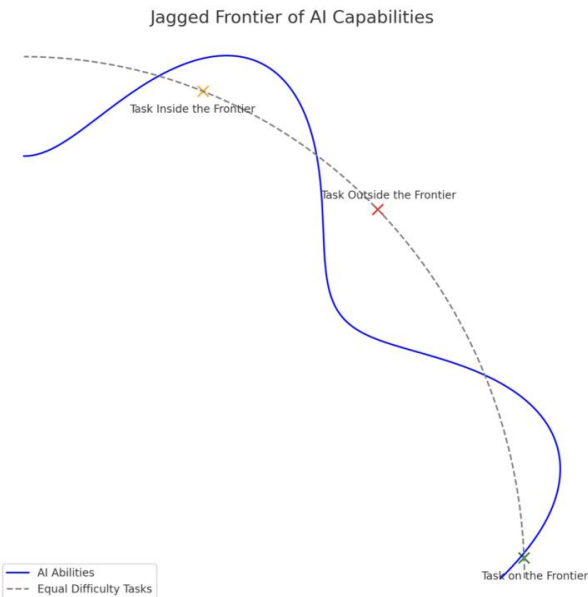
- Support experimentation infrastructure, not just technology adoption
- Reward firms that invest in discovering human-AI complementarities (eg targeted training subsidies)
- Be cautious about assuming displacement—the bigger risk may be underutilization

# Thank you

Raffaella Sadun



# Not a playbook, but a method for scalable experimentation



“Navigating the Jagged Technological Frontier,”  
Dell’Acqua et al 2024

# How does this happen, in practice?

Two distinct applications, with **very different consequences for humans**

**Co-pilots**, working in cooperation with humans

- **Complement** human tasks, making humans more productive
- Example: lawyer + AI research assistant

**Agents**, working independently on complex tasks

- **Replace** human tasks, shifting humans to new roles—or displacing them altogether
- Example: AI handles entire contract review

# Adoption “in the wild” is still lagging



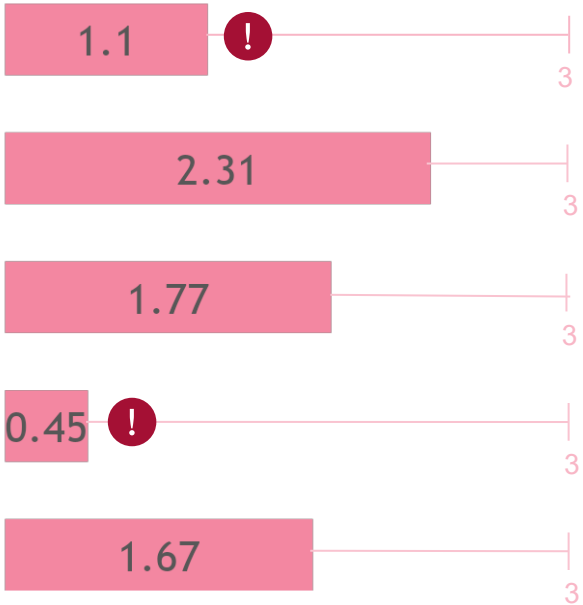
Survey of 1,200 Chief Human Resource Officers of US firms with 100+ employees

## New Training Paradigm

- Reskilling is a strategic imperative
- Reskilling is the responsibility of every leader and manager
- Reskilling goes beyond training – it is a holistic change management initiative
- Employees want to reskill - when it makes sense
- Reskilling takes a village

To what extent do surveyed companies follow best practice?

On a scale of 0-3 based on empirical proxies created from answers to questions relevant to each paradigm



Source: “Designing a successful reskilling program”, Sadun et al. HBR, 2024

# The need for evidence has never been higher



## IDENTIFYING WHO SHOULD BE RESKILLED

We explore the drivers of successful reskilling initiatives, helping organizations identify the best candidates for training programs to maximize impact and inclusivity.

## DESIGNING HOW RESKILLING HAPPENS

From the structure of training programs—virtual or in-person, individual or cohort-based—to the mix of technical and softskills, we provide actionable insights to help organizations optimize their reskilling efforts.

## MEASURING THE OUTCOMES OF RESKILLING

Through rigorous evaluations, we assess the individual and organizational impact of reskilling initiatives, including employee satisfaction, productivity, and well-being, as well as broader performance metrics like technology adoption and team efficiency.



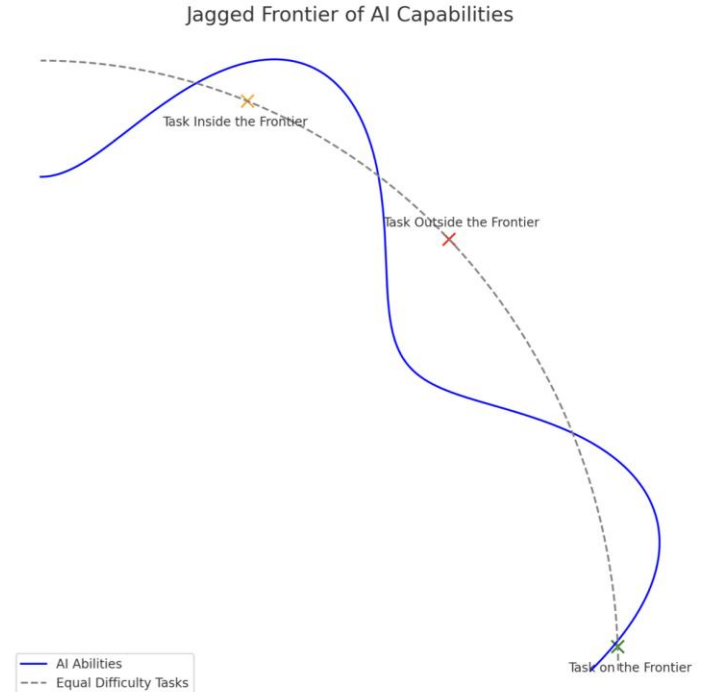
# Technological frictions

## Technological uncertainty

- “Jagged technological frontier”

## Technological complementarities

- “Prompting” is useful if intertwined with proprietary data, risk controls, contextual knowledge, and appropriate job design



“Navigating the Jagged Technological Frontier,”  
Dell’Acqua et al 2024

# Scary extrapolations

INNOVATION > ENTERPRISE TECH

## Will AI Make Universal Basic Income Inevitable?

By [Bernard Marr](#), Contributor. 

[Follow Author](#)

Dec 12, 2024 at 01:48am EST

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*“AI could **wipe out half of all entry-level white-collar jobs** — and spike unemployment to 10-20% in the next one to five years, Amodei told us in an interview from his San Francisco office.*

*Amodei said AI companies and government need to stop “sugar-coating” what’s coming: the **possible mass elimination of jobs across technology, finance, law, consulting and other white-collar professions, especially entry-level gigs.**”*

Axios, May 25 2025