The Economics of the Emerging AI Ecosystem

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AI Governance: New Tradeoffs for Sovereignty, Trust, and Sustainability

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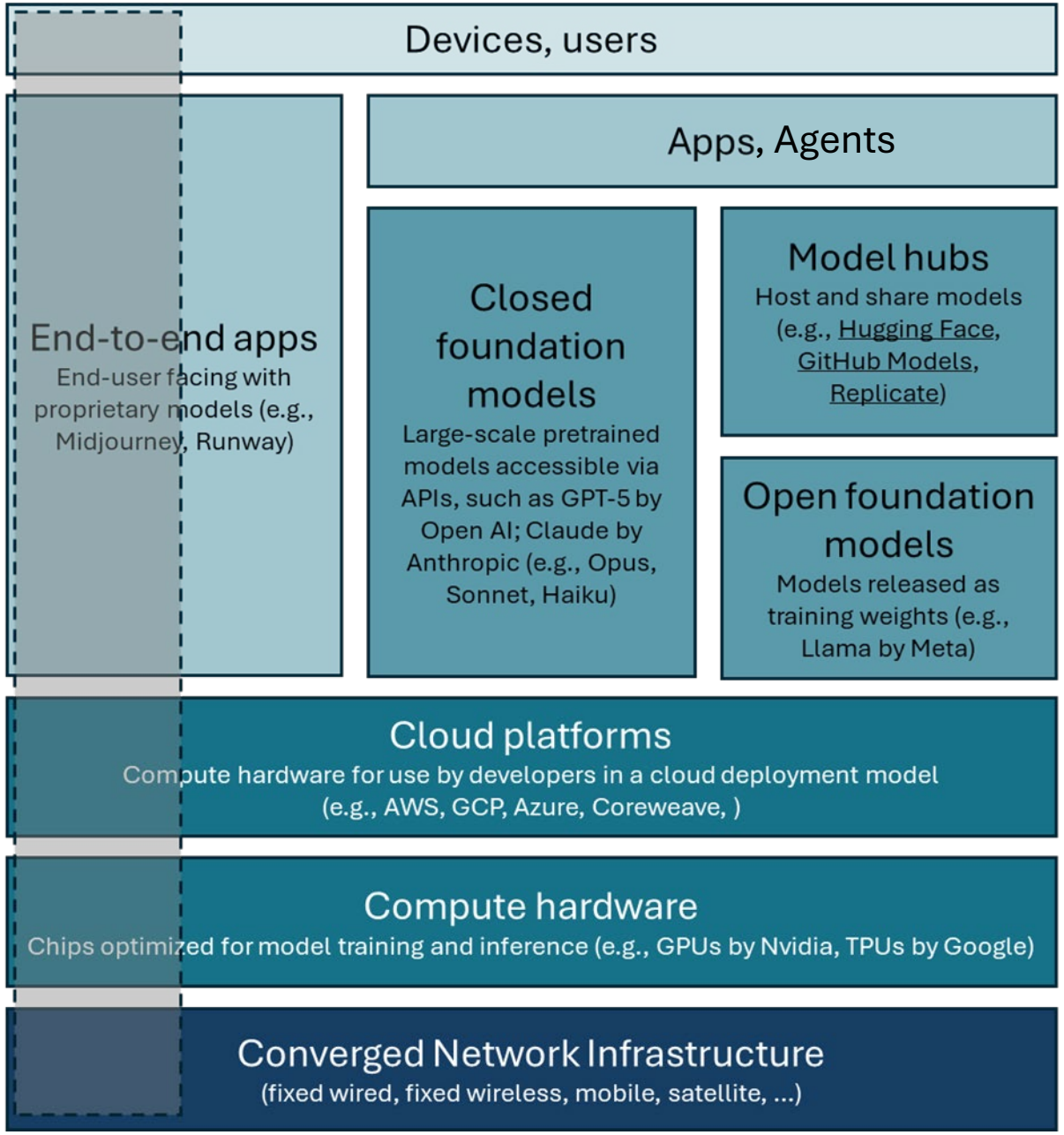
Main points

- AI is a novel infrastructural-epistemic system
- It has tremendous, but heterogeneous effects
- It will not contribute to human flourishing automatically

AI value system

- Economic attributes
  - General Purpose Technology (GPT)
  - High economies of scale, scope (platform, big tech power)
  - Significant positive and negative spillover effects
- Unique AI attributes
  - Prediction machines (Agrawal, Gans, Goldfarb, 2018, 2022, 2024)
  - “Invention of a method of inventing” (IMI) (Griliches, 1960)
- Infrastructural-epistemic innovation system



Economizing: markets and competition

- Friedrich A. Hayek (1945, *The Use of Knowledge in Society*)
  - Knowledge is dispersed, fragmented, and incomplete among individuals
  - The price mechanism coordinates (tacit) “knowledge of time and place”
  - Competition is a “discovery procedure” to uncover this knowledge
- AI affects these processes in ambiguous ways
  - AI expands the scope of centralized information processing and decision making (e.g., Amazon pricing algorithms updating prices in real time)
  - AI gradually encroaches on tacit knowledge (e.g., knowledge of a skilled nurse, master craftsperson, local politician) and formalizes it
  - AI accelerates discovery process (e.g., material science, drug development) but introduces new pathologies (e.g., algorithmic collusion)
- Will AI contribute to a “Hayekian nightmare” of information concentration in corporations?

Market failure and deficiency

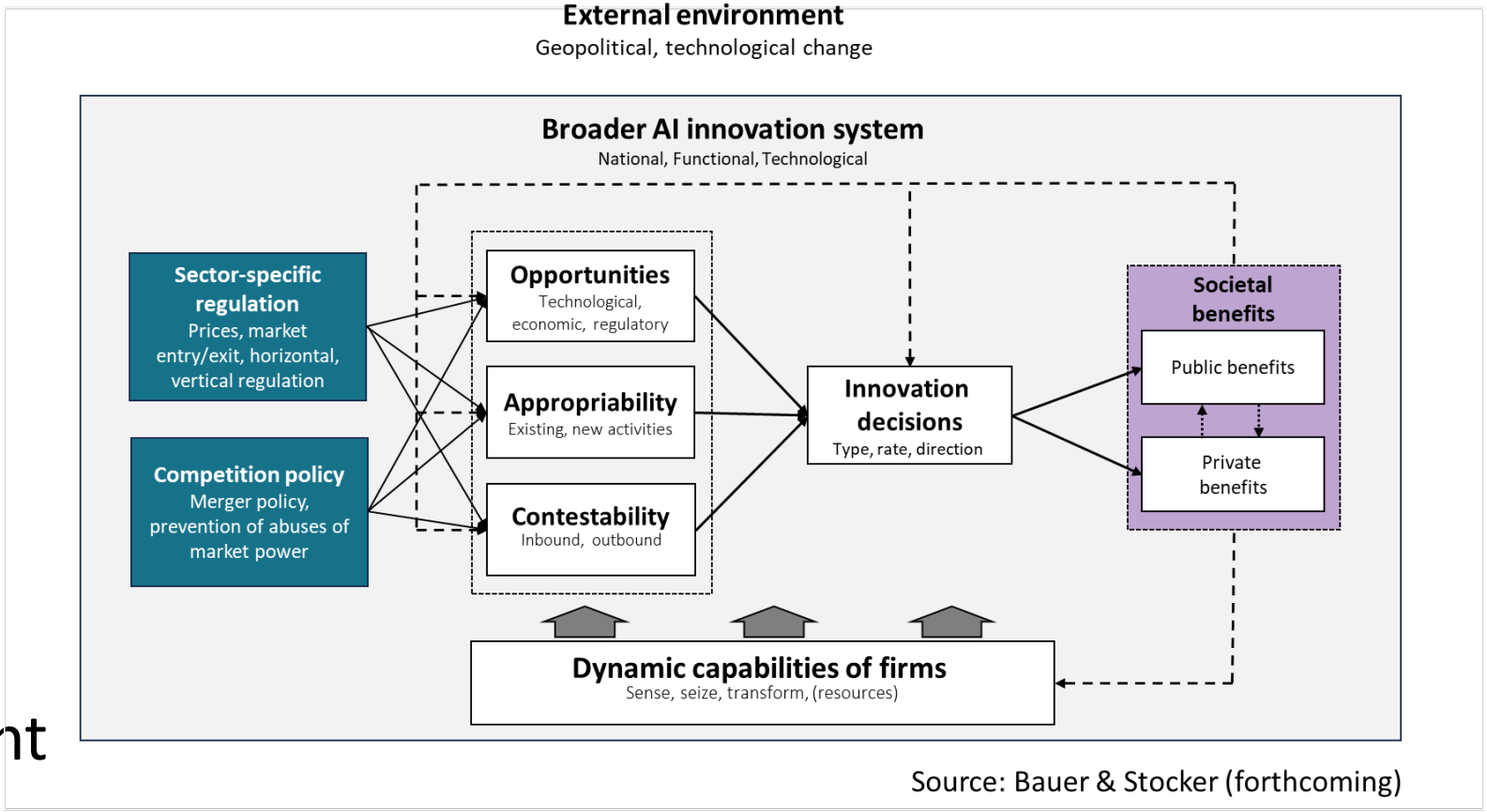
- More recently, economists have explored the conditions under which markets do not work well (e.g., Stiglitz, Akerlof, Spence)
  - Incomplete and asymmetrically distributed information
  - Hidden information: adverse selection, moral hazard
- AI has heterogeneous and contradictory effects
  - Improves markets by reducing information asymmetries (e.g., health records allow inferences about individual behavior)
  - Introduces new inefficiencies by creates new information and power asymmetries (e.g., opaque decision algorithms, workplace surveillance)
  - Creates distributional effects through the hyper-segmentation of markets (e.g., perfect price differentiation, segmentation of health risks)

Organizations: decisions and judgment

- Firms emerge where markets do not work well (have high transaction costs) (Williamson)
  - Humans and organizations are constrained by bounded rationality (Simon)
  - They use satisficing, heuristics, routines, and standard operating procedures
- AI affects the bounds of rationality and introduces new problems
  - It expands rationality to new bounds (data quality, compute costs), but may lose tacit knowledge embedded in routines
  - Organizations are less constrained by the cognitive bandwidth of decision-makers, but require better judgment to assess AI-generated outcomes
  - AI may introduce algorithmic rigidity and algorithmic satisficing (e.g., “good enough” solutions using gradient descent)

New knowledge: invention, innovation

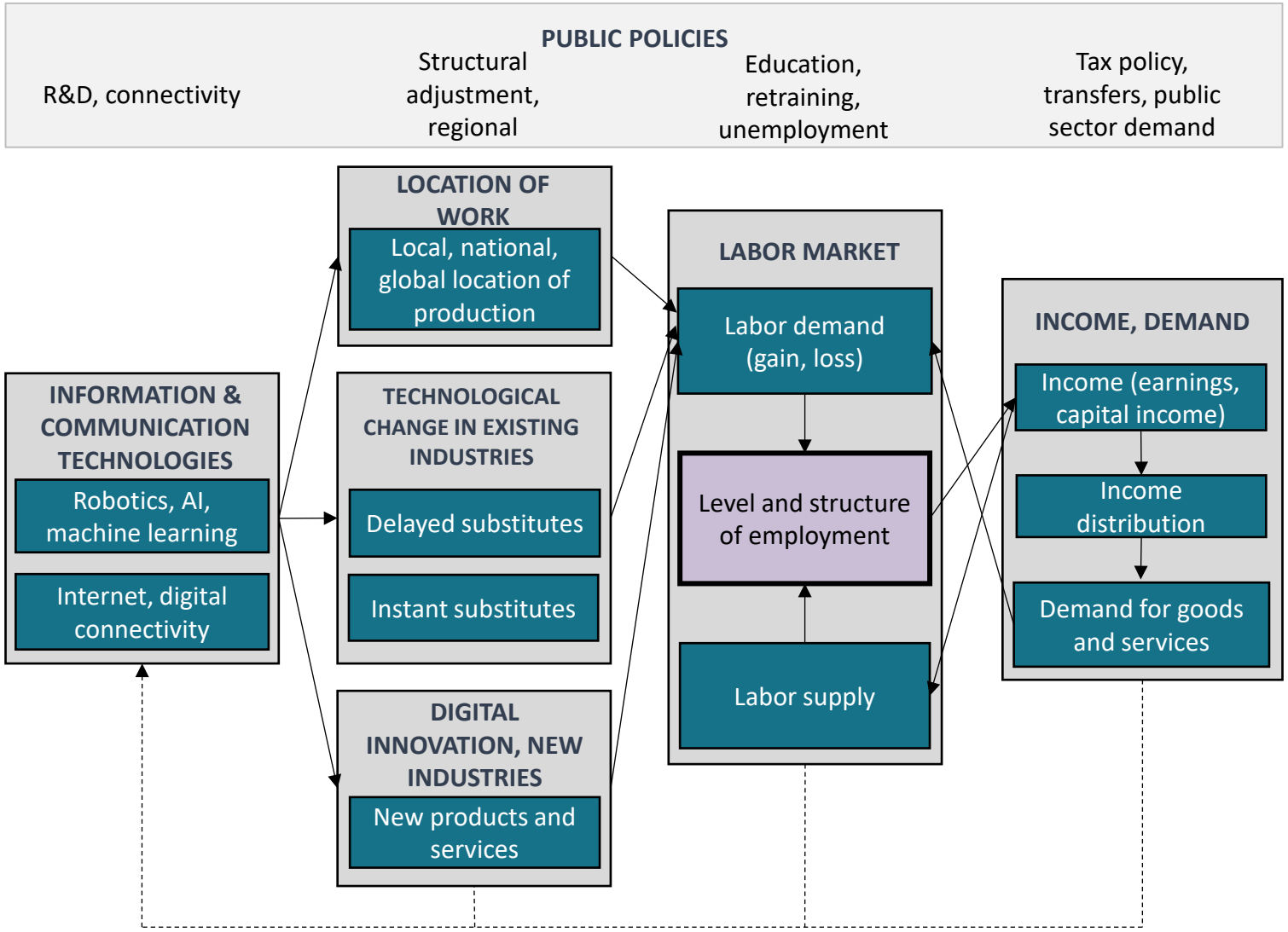
- "Creative destruction" propelled by
  - Entrepreneurs
  - Corporations
- AI changes key drivers
  - Opportunities
  - Appropriability
  - Contestability
  - Dynamic capabilities
- Human judgments remain vitally important



Source: Bauer & Stocker (forthcoming)

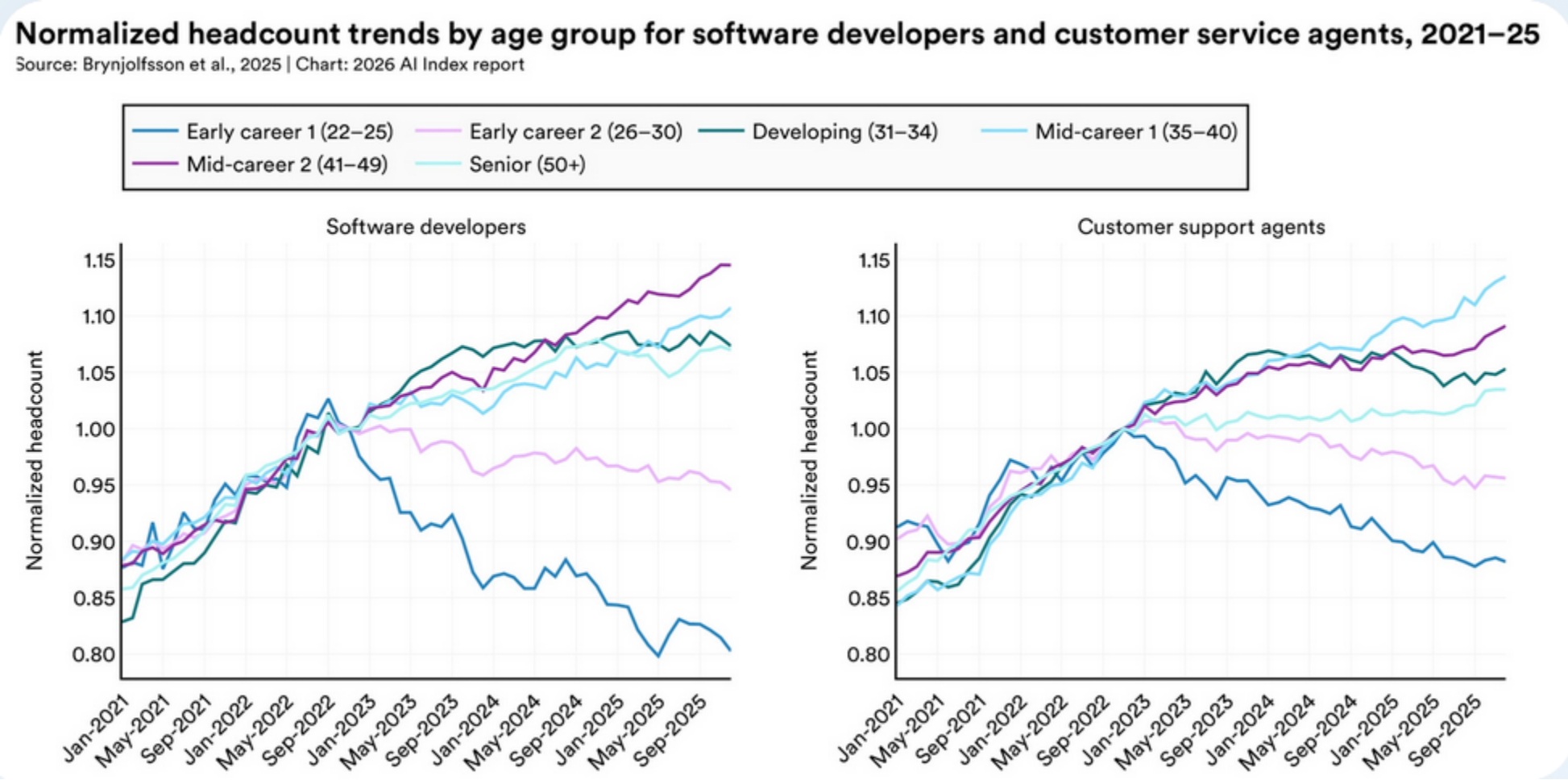
Future of work

- Productivity changes (Acemoglu & Johnson, 2023)
  - “So-so” automation replaces labor with AI
  - Task creation (human-complementary AI)
- Diverse effects
  - Productivity J-curve
  - Productivity equalization (e.g., software engineering +12-27% low skill, +5-10% high skill)
  - Task, job displacement



Source: Garcia-Murillo, MacInnes, & Bauer (2018)

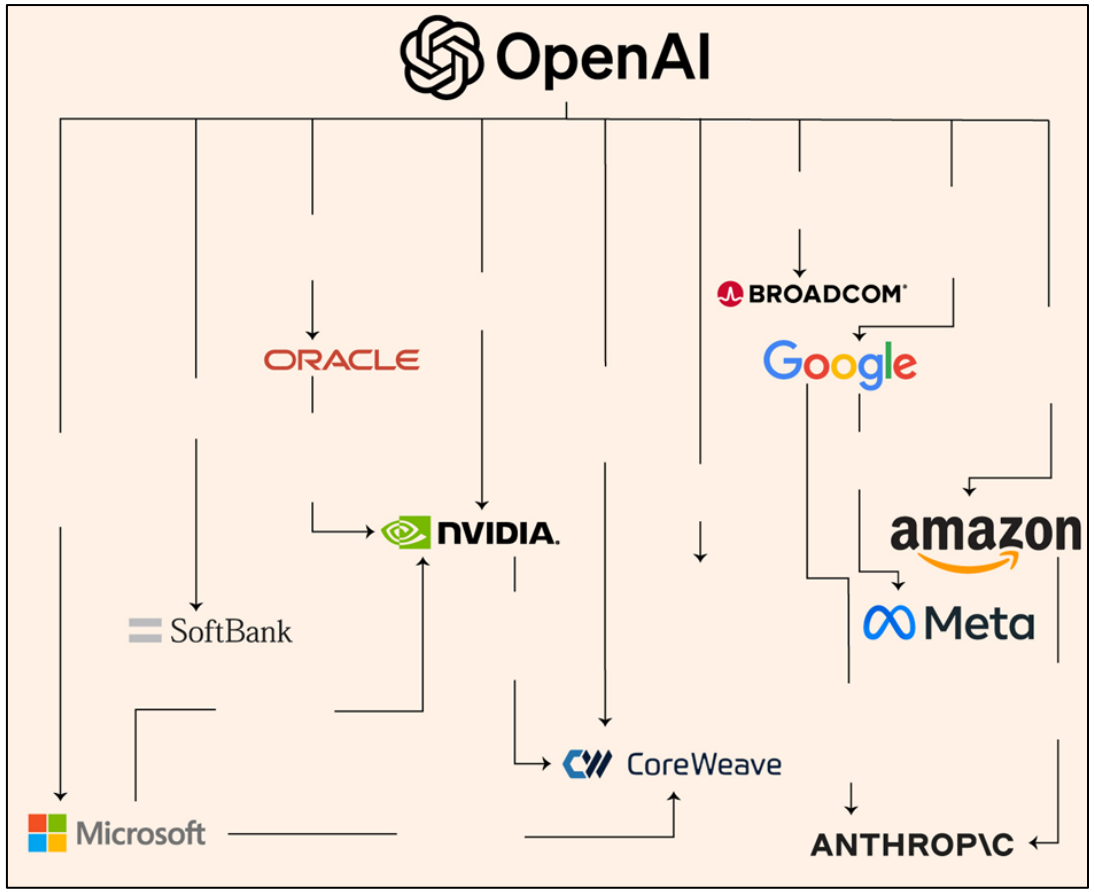
Heterogeneous workforce impacts



Source: 2026 AI Index Report, p. 222

Market power, platform entrenchment

- Major segments of AI value chain (e.g., foundation models, compute, GPUs) highly concentrated
- Economic rents are highly concentrated
- Fragility of competition, which is often fierce but could be stifled quickly
- Concentration may reduce the diversity of innovation searches

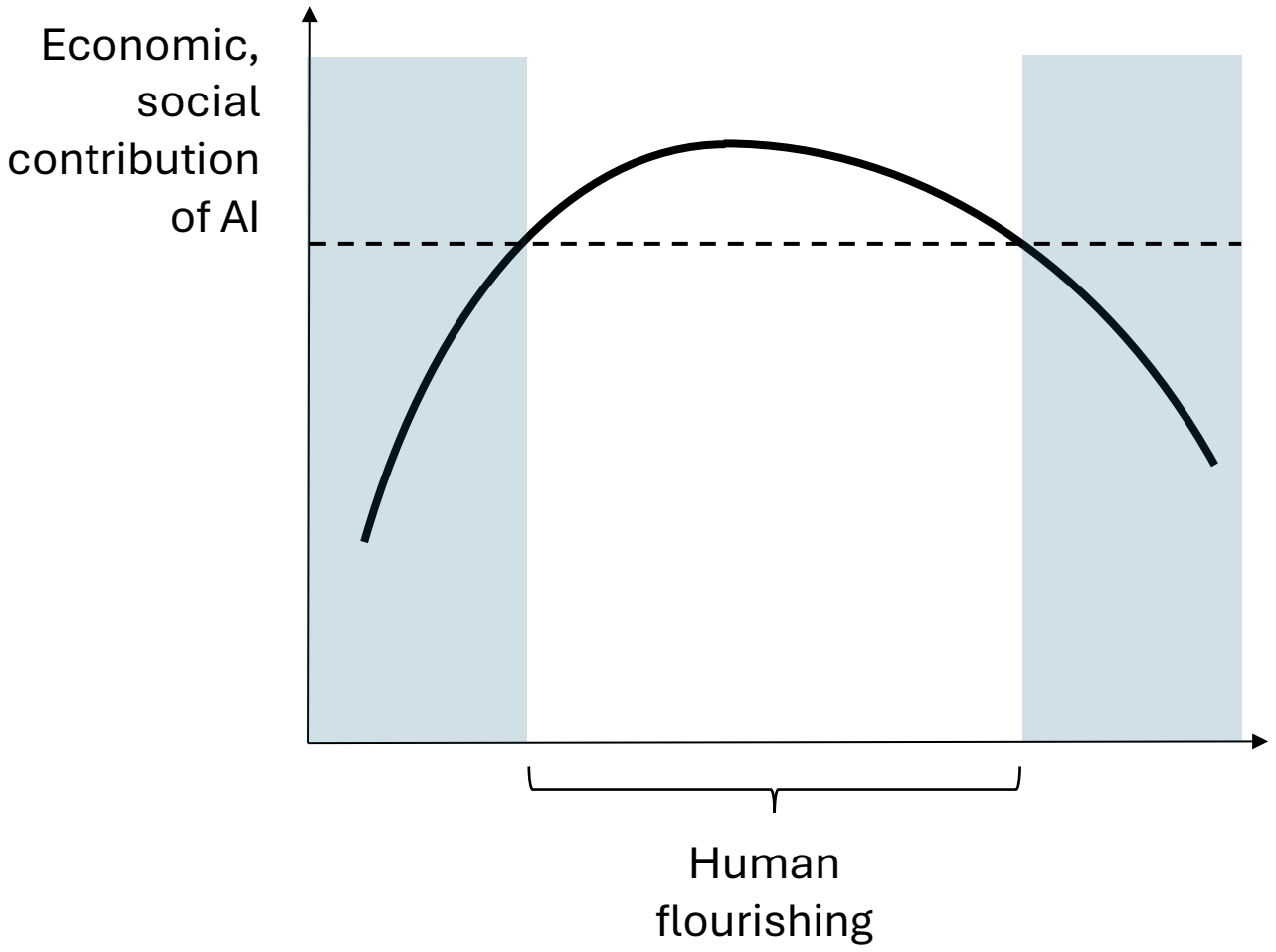


Source: Financial Times, October 15, 2025

Inequality

- Several dimensions of inequality are implicated
  - Accelerated **capital-labor split** (stagnant wage growth, increasing share of national income to investors)
  - **Within-labor inequality** (workers with skills that are complemented by AI will see gains, those that are substituted will face wage pressure or displacement
  - **Geographic inequality** (economic gains likely concentrated, labor displacement effects are likely dispersed)
  - **Environmental inequalities** (costs, e.g., water, air pollution, noise, e-waste, mining are localized, benefits concentrated elsewhere)
  - **Global inequality** and opening of new digital divides
- Policy choices mediate whether AI is de-equalizing or equalizing

Takeaways: AI and human flourishing



1. AI is an infrastructural-epistemic technology
2. Its effects are contingent on institutions and policy
3. Harnessing the benefits of AI requires good policy
4. Good policy is hard

References and sources

- Agrawal, A., Gans, J. S., & Goldfarb, A. (2018). *Prediction machines: The simple economics of artificial intelligence.* Harvard Business Review Press.
- Agrawal, A., Gans, J., & Goldfarb, A. (2022). *Power and prediction: The disruptive economics of artificial intelligence.* Harvard Business Press.
- Agrawal, A., Gans, J. S., & Goldfarb, A. (2024). Artificial intelligence adoption and system-wide change. *Journal of Economics & Management Strategy,* 33(2), 327-337.
- Acemoglu, D., & Johnson, S. (2023). *Power and progress: Our thousand-year struggle over technology and prosperity.* PublicAffairs.
- Aghion, P., Bloom, N., Blundell, R., Griffith, R., & Howitt, P. (2005). Competition and innovation: An inverted-U relationship. *Quarterly Journal of Economics*, 120(2), 701-728.
- Aghion, P., Antonin, C., & Bunel, S. (2021). *The power of creative destruction*. Harvard University Press.
- Akerlof, G. A. (1978). The market for “lemons”: Quality uncertainty and the market mechanism. In: *Uncertainty in economics* (pp. 235-251). Academic Press.
- Bauer, J. M. & Stocker, V. (forthcoming). The interplay of regulation and innovation in U.S. information and communication policy. Quello Center Working Paper.

References and sources ...

- Garcia-Murillo, M., MacInnes, I., & Bauer, J. M. (2018). Techno-unemployment: A framework for assessing the effects of information and communication technologies on work. *Telematics and Informatics*, 35(7), 1863-1876.
- Griliches, Z. (1960). Hybrid Corn and the Economics of Innovation: Geographic differences in the use of hybrid corn are explained by differences in the profitability of that use. *Science,* 132(3422), 275-280.
- HAI (2026). 2026 AI Index Report. Stanford University, https://hai.stanford.edu/ai-index/2026-ai-index-report/economy
- Hayek, F. A. (1945). The use of knowledge in society. *American Economic Review*, 35(4), 519-530.
- Leijonhufvud, A. (1993). Towards a not-too-rational macroeconomics. *Southern Economic Journal*, 60(1), 1-13.
- Simon, H. A. (2019). The Sciences of the Artificial, reissue of the third edition with a new introduction by John Laird. MIT Press.
- Simon, H. A. (2013). *Administrative behavior*. Simon and Schuster.
- Spence, M. (1978). Job market signaling. In: *Uncertainty in economics* (pp. 281-306). Academic Press.
- Stiglitz, J. E. (2000). The contributions of the economics of information to twentieth century economics. *Quarterly Journal of Economics*, 115(4), 1441-1478.

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